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ENTRANCE EXAMINATION PAPERS

ENGLISH A

1. Define a clause. Enumerate the clauses in the sentence below, and state the grammatical relation of each.

"I was this morning surprised with a great knocking at the door, when the landlady's daughter came up and told me that there was a man below who desired to speak with me."

2. Write a composition of about 300 words on one of the following topics. Plan carefully, so that each paragraph shall mark a definite stage in the discussion. [*This composition should be mainly expository.*]

- (a) An explanation of your study of poetry in school.
- (b) Useful lessons in citizenship as set forth in any essays or speeches you have read.
- (c) Franklin as a patriot and statesman.
- (d) The importance of a boy or of a girl in the plot of any novel you have read.
- (e) The meaning of knighthood as exemplified in *The Idylls of the King*.
- (f) Likenesses between characters in different plays of Shakespeare.
- (g) The principle and uses of the aeroplane.
- (h) The interest of Irving's essays.

3. Write a composition of about 150 words on one of the following topics. [*This composition should be mainly narrative or descriptive.*]

- (a) An episode in the life of Joseph or Esther or Ruth or Ulysses or Achilles.
- (b) A stage scene in *The Merchant of Venice* or *As You Like It*.
- (c) A canoe trip.
- (d) An incident in the class room.
- (e) A letter giving an account of an interesting incident of the past summer.

ENGLISH B

Group I. *a.* Discuss the parts played by women in *Hamlet*, *Macbeth*, or *Julius Caesar*.

b. What elements of tragedy other than death do you find in *Macbeth* or in *Hamlet*? Discuss.

Group II. *a.* Select three lyrics, one by Wordsworth, one by Shelley, and one by Keats, and compare them with reference to subject-matter and treatment.

b. Comment on the following lines by references to the life, works, and ideals of Milton.

"And join with thee calm Peace, and Quiet,
Spare Fast, that oft with gods doth diet."

"And add to these retired Leisure,
That in trim gardens takes his pleasure."

"And pomp and feast and revelry,
With mask and antique pageantry."

"Mortals that would follow me,
Love Virtue; she alone is free."

c. Explain the significance of the Holy Grail and the part it plays in Tennyson's *Idylls of the King*.

Group III. *a.* What is Burke's argument about the population of the colonies? At what point in the speech does he discuss this topic? What is the reason for this position?

b. Name some features of Macaulay's style and show how they help to make effective the *Life of Johnson* or the *Speeches on Copyright*.

c. What excellences does Carlyle find in Burns? What poems of Burns seem to you to reflect these excellences?

GREEK

A.

Translate into English :

"Ο δὲ δὴ ἔγραψα ὅτι βασιλεὺς ἐξεπγάγη τῇ ἐφόδῳ, τῷδε δὴλον ἦν. τῇ μὲν γὰρ πρόσθεν ἡμέρα πέμπων τὰ ὄπλα παραδιδόναι 1
2

ἐκέλευε, τότε δὲ ἄμμι ἡλίψ ἀνατέλλοντι κήρυκας ἔπεμψε περὶ 3
 σπονδῶν. οἱ δ' ἐπεὶ ἦλθον πρὸς τοὺς προφύλακας, ἐζήτουν τοὺς 4
 ἄρχοντας. ἐπειδὴ δὲ ἀπήγγελλον οἱ προφύλακες, Κλέαρχος τυχὼν 5
 τότε τὰς τάξεις ἐπισκοπῶν εἶπε τοῖς προφύλαξι κελεύειν τοὺς 6
 κήρυκας περιμένειν ἄχρι ἂν σχολάσῃ. ἐπεὶ δὲ κατέστησε τὸ 7
 στράτευμα ὥστε καλῶς ἔχειν ὁρᾶσθαι πάντῃ φάλαγγα πυκνήν, 8
 τῶν δὲ ἀόπλων μηδένα καταφανῇ εἶναι, ἐκάλεσε τοὺς ἀγγέλους, 9
 καὶ αὐτός τε προῆλθε τοὺς τε εὐοπλοτάτους ἔχων καὶ εὐειδεστά- 10
 τοὺς τῶν αὐτοῦ στρατιωτῶν καὶ τοῖς ἄλλοις στρατηγοῖς ταῦτά 11
 ἔφρασεν. ἐπεὶ δὲ ἦν πρὸς τοῖς ἀγγέλοις, ἀνθρώπα τί βούλονται. 12
 οἱ δ' ἔλεγον ὅτι περὶ σπονδῶν ἤκοιεν ἄνδρες οἵτινες ἱκανοὶ ἔσονται 13
 τά τε παρὰ βασιλέως τοῖς Ἑλλήσιν ἀπαγγεῖλαι καὶ τὰ παρὰ τῶν 14
 Ἑλλήνων βασιλεῖ. ὁ δὲ ἀπεκρίνατο, Ἀπαγγέλλετε τοῖνυν αὐτῷ 15
 ὅτι μάχης δεῖ πρῶτον· ἄριστον γὰρ οὐκ ἔστιν οὐδ' ὁ τολμήσων 16
 περὶ σπονδῶν λέγειν τοῖς Ἑλλήσιν μὴ πορίσας ἄριστον. 17

1. Explain the use of *ὅ* (l. 1), *ὁ* (l. 15), *ὅ* (l. 16), *τὰ* (l. 14); of *αὐτός* (l. 10), *αὐτοῦ* (l. 11), *ταῦτά* (l. 11), *αὐτῷ* (l. 15).

2. State the use of these conjunctions in the following places indicating exactly the clause correlative to each: *τε* (l. 10, twice), *καὶ* (l. 10, twice), *καὶ* (l. 11).

3. Inflect through the singular *οἵτινες* (l. 13)

4. What is "indirect statement"? How is it expressed in Greek? Illustrate from this extract.

5. Give a synopsis (the first form occurring in each mood) of *δίδωμι* in the present and aorist, and of *καθίστημι* in present and both aorists.

B.

Translate into Greek:

After the death of Cyrus, who was killed in the great battle, Clearchus became general. That he was a brave man, as Xenophon says, and clever was shown in this way. The King once sent messengers to the Greeks about a truce. Now Clearchus wished to make-a-truce, but he said "If you do not furnish my soldiers a breakfast, I shall not listen to you." In this way his soldiers got provisions.

C.

HOMER'S ILIAD.

Translate into English :

- 1 Ἥμος δ' ἥελιος κατέδυ, καὶ ἐπὶ κνέφας ἦλθεν,
- 2 δὴ τότε κοιμήσαντο παρὰ πρυμνήσια νηός.
- 3 Ἥμος δ' ἠριγένεια φάνη ῥοδοδάκτυλος Ἥως,
- 4 καὶ τότε ἔπειτ' ἀνάγοντο μετὰ στρατὸν εὐρὺν Ἀχαιῶν.
- 5 τοῖσιν δ' ἵκμενον οὖρον ἱεὶ ἐκάεργος Ἀπόλλων,
- 6 οἱ δ' ἰστὸν στήσαντ' ἀνά θ' ἰστία λευκὰ πέτασσαν.
- 7 ἐν δ' ἄνεμος πρῆσεν μέσον ἰστίον, ἀμφὶ δὲ κύμα
- 8 στεῖρην πορφύρεον μεγάλ' ἴαχε νηὸς ἰούσης.
- 9 ἡ δ' ἔθεεν κατὰ κύμα, διαπρήσσουσα κέλευθον.
- 10 αὐτὰρ ἐπεὶ ῥ' ἵκοντο κατὰ στρατὸν εὐρὺν Ἀχαιῶν,
- 11 νῆα μὲν οἷγε μέλαιναν ἐπ' ἠπείροιο ἔρυσσαν
- 12 ὑψοῦ ἐπὶ ψαμάθοις, ὑπὸ δ' ἔρματα μακρὰ τάνυσσαν.
- 13 αὐτοὶ δ' ἐσκίδναντο κατὰ κλισίας τε νέας τε.

1. Write out verses 5, 8, 11, 12, indicating the quantity of each syllable, dividing the verse into feet, and marking the caesural pauses.

2. Illustrate from the above any differences in (a) words, and (b) forms between Homeric and Attic usage.

3. Outline the plot of the Iliad.

4. Who was ἐκάεργος Ἀπόλλων?

LATIN

A separate book should be used for each set of questions, i. e. one book for I, another for II, etc.

At the beginning of one of the books, state how long you have studied Latin and give the exact amount of each Latin author you have read.

I.

FIRST YEAR LATIN.

1. Write the genitive and ablative, singular, and the genitive and accusative, plural, of: *eadem manus, hoc cornu, ego, id, celer, mille, sola*.

2. Give the comparative and superlative degrees of *male, acer, diu, fortiter, similis*.

3. Give a synopsis of *eicio* in the third person, plural (indicative and subjunctive).

4. Give the principal parts of : *jacio, jaceo, absum, tendo, intellego, sumo, reperio*.

5. Write, in both active and passive, (*a*) the first person, singular, of the present and future, indicative, and (*b*) the second person, plural, of the present and pluperfect, subjunctive, of *defendo* and *respondeo*.

6. Translate into Latin, marking all long vowels in what you write :

(*a*) We were prevented from going with you to Athens.

(*b*) I ordered him to ask them why they had withdrawn from the country and returned to the city.

(*c*) The soldiers ought not to be injured by you.

(*d*) Although I knew that the city would be captured within two or three days, I decided to remain at home a little longer.

(*e*) Do not wait for him to come to us. Let us all go to him.

7. Translate :

Biduo post Ariovistus ad Cæsarem legatos mittit, velle se de his rebus, quæ inter eos agi cœptæ neque perfectæ essent, agere cum eo : uti aut iterum colloquio diem constitueret ; aut, si id minus vellet, ex suis legatis aliquem ad se mitteret. Colloquendi Cæsari causa visa non est ; et eo magis, quod pridie Germani retineri non poterant, quin in nostros tela conjicerent. Legatum ex suis sese magno cum periculo ad eum missurum et hominibus feris objecturum existimabat.

II.

LATIN GRAMMAR

1-5. Answer the first five questions under First Year Latin (Part I of the present paper).

6. Mention two different uses of *ut* with the indicative and three of *ut* with the subjunctive.

7. How does *nē* differ in use (as an adverb) from *non* ? *Nonne* from *num* and *-nē* ? *Aliquis* from *quisquam* ? *Alteri*

from *alii* and *ceteri*? *Se* from *ipsum*? *Cum* from *ubi* and *quando* (in the sense of "when")? *Dum* in the sense of "while," from *dum* in the sense of "as long as?"

8. What tenses of direct discourse become imperfect subjunctive in indirect discourse, after historical tenses?

III

SECOND YEAR LATIN

·CAESAR

1. Translate :

His de rebus Cæsar certior factus et infirmitatem Gallorum veritus, quod sunt in consiliis capiendis mobiles et novis plerumque rebus student, nihil his committendum existimavit. Est autem hoc Gallicæ consuetudinis, uti et viatores, etiam invitos, consistere cogant, et quod quisque eorum de quaque re audierit aut cognoverit, quærant; et mercatores in oppidis vulgus circumsistat, quibusque ex regionibus veniant, quasque ibi res cognoverint, pronuntiare cogant. His rebus atque auditionibus permoti de summis sæpe rebus consilia ineunt quorum eos e vestigio paenitere necesse est, cum incertis rumoribus serviant, et plerique ad voluntatem eorum ficta respondeant.

Account for (a) the case of: *rebus*, *consuetudinis*; *quorum*; *eos*.

(b) for the mood and tense of: *audierit*, *circumsistat*; *serviant*.

(c) for the tense of: *veritus*.

(d) for the infinitive, *paenitere*.

Give the principal parts of: *committendum*; *cogant*; *consistere*; *quærant*; *permoti*; *respondeant*.

2. Translate the following and write the form that each italicized word would have in direct discourse :

Ad hæc Cæsar respondit: *Se* magis consuetudine sua quam merito eorum civitatem *conservaturum*, si prius quam murum aries *attigisset se dedidissent*: sed deditionis *nullam esse condicionem*, nisi armis traditis: *se* id, quod in Nerviiis *fecisset, facturum* finitimisque *imperaturum*, ne quam dediticiis populi Romani injuriam *inferrent*.

Decline: *consuetudine*; *se*; *aries*, *nullam* *armis*; *id*; *quod*.

IV

THIRD YEAR LATIN

CICERO AND COMPOSITION

1. Translate (*a*), if you have read the oration ; otherwise (*b*) :

(*a*) Ergo ille corporis motu tantum amorem sibi conciliarat a nobis omnibus : nos animorum incredibiles motus celeritatemque ingeniorum neglegemus ? Quoties ego hunc Archiam vidi, iudices,—utar enim vestra benignitate, quoniam me in hoc novo genere dicendi tam diligenter attenditis—, quoties ego hunc vidi, cum litteram *scripsisset* nullam, magnum numerum optimorum versuum de eis ipsis rebus, quae tum *agerentur*, dicere ex tempore ! Quoties *revocatum* eandem rem dicere commutatis verbis atque sententiis ! Quae vero accurate cogitateque *scripsisset*, ea sic vidi probari, ut ad veterum scriptorum laudem perveniret. Hunc ego non *diligam*, non admirer, non omni ratione defendendum putem ?

Account for the construction of italicized words.

(*b*) Nunc, patres conscripti, ego *mea* video quid *intersit* : si eritis secuti sententiam C. Caesaris, quoniam hanc is in re publica viam, quae popularis habetur, secutus est, fortasse minus erunt hoc *auctore* et cognitore hujusce sententiae *mihi* populares impetus pertimescendi ; sin illam alteram, nescio an amplius mihi negoti *contrahatur* ; sed tamen meorum periculorum rationes utilitas rei publicae *vincat*. Habemus enim a Caesare, sicut ipsius dignitas et majorum ejus amplitudo postulabat, sententiam tamquam obsidem perpetuae in rem publicam voluntatis ; intellectum est quid interesset inter levitatem contionatorum et animum vere popularem, saluti populi consulentem.

Account for the construction of italicized words.

2. Translate into Latin, marking all long vowels in what you write :

(*a*) 1. How does it concern you whether I remain at home in the city or go to the country.

2. Do you not think that the city will be captured and that the people ought to be spared ?

3. If you had persuaded him not to come, I should have known what to do.

4. Do not order me to do what I know would bring disaster upon us.

(b) Having defeated the Helvetii Caesar returned across the Alps into Hither Gaul, where he passed the winter. At the beginning of the next spring he enrolled two new legions and set out for Gaul. The Belgae had long seen that Caesar was gradually drawing near them and believed that he would soon lead a Roman army against them. Accordingly, remembering their ancient valor, they decided to resist the Romans.

V

FOURTH YEAR LATIN

VIRGIL

1. Translate :

Haec fatus, latos *humeros* subjectaque colla
 Veste super fulvique *insternor* pelle leonis,
 Succedoque *oneri*; *dextrae* se parvus Iulus
 Implicuit, sequiturque patrem non *passibus* aequis;
 Pone subit conjunx. Ferimur per opaca locorum;
 Et me, quem dudum non ulla injecta movebant
 Tela neque adverso glomerati ex agmine Graii,
 Nunc omnes terrent aurae, sonus excitat omnis
 Suspensum et pariter comitique *onerique timentem*
 Jamque propinquabam *portis*, omnemque videbar
 Evasisse viam, subito cum creber ad auris
 Visus adesse pedum sonitus, genitorque per umbram
 Prospiciens "Nate," exclamat, "fuge, nate; propinquant.
 Ardentes clipeos atque aera micantia cerno."

Account for the construction of the italicized words.

2. Translate :

"En, quid *ago*? Rursusne procos irrisa priores
 Experiar, Nomadumque petam connubia supplex,
 Quos ego sim toties jam dedignata *maritos*?—
 Iliacas igitur classes atque ultima Teucrum
 Jussa sequar? quiane auxilio juvat ante levatos,

Et bene apud memores veteris stat gratia *facti*?—
 Quis me autem, fac *velle*, sinet, ratibusque superbis
 Invisam accipiet? nescis, heu, perdita, necdum
 Laomedontae sentis perjuriam gentis?
 Quid tum? Sola fuga nautas comitabor ovantis?
 An *Tyriis* omnique manu stipata meorum
 Inferar, et, quos Sidonia vix urbe revelli,
 Rursus agam pelago, et ventis dare vela jubebo?—
 Quin morere, ut merita es, ferroque averti dolorem!
 By whom and under what circumstances are these words
 spoken?

Account for the construction of the italicized words.

3. Write briefly on the second book of the Aeneid.
4. When did Virgil live and what did he write besides the Aeneid?
5. Write briefly on each of the following: *Aeolus*; *Pallas*; *Diana*; *Calchas*; *Sinon*; *Laocoon*; *Cassandra*; *Creusa*; *Menelaus*; *Vesta*; *Mercury*; *Iris*.

FIRST YEAR GERMAN

N. B. State where and when you have studied German.

I

At the option of the candidate, 20% of the 100% may be counted on an oral test to be given in connection with this paper. Candidates not electing this oral test must answer question VII.

II

Translate into English:

(a) Nun trat der Herbst ein; die Blätter im Walde wurden gelb und braun; der Wind faßte sie, so daß sie umher tanzten; und oben in der Luft war es sehr kalt; die Wolken hingen schwer von Hagel und Schneeflocken; und auf dem Zaune stand der Rabe und schrie: „Au! Au!“ vor Kälte; ja, es fror einen schon, 5
 wenn man nur daran dachte. Das arme Entlein hatte es wahrlich nicht gut! Eines Abends—die Sonne ging so schön unter!—kam ein Schwarm herrlicher, großer Vögel aus dem Busche; das Entlein hatte nie so schöne gesehen; sie waren blendend weiß, mit langen Hälsen: es waren Schwäne. 10

(b) Ein alter Mann kam aus dem Walde und hatte ein Bündel Holz auf dem Rücken. Als er eine Strecke damit gegangen war, wurde ihm die Last zu schwer. Ungeduldig warf er sie auf die Erde und wünschte sich den Tod. Dieser erschien auch sogleich und fragte: „Was wünschst du?“ Da sagte der erschrockene 5 Greis: „Ich wollte dich nur bitten, mir mein Holz auf die Schultern zu heben.“

III

1. Give the principal parts, with the auxiliary of the perfect tense and the third person singular present indicative (model: *weggehen, ging weg, ist weggegangen, geht weg*) of: *trat ein* (a, 1), *dachte* (a, 6), *ging unter* (a, 7-8), *erschien* (b, 4), *bitten* (b, 6), *heben* (b, 7).

2. Conjugate in the present and preterit (imperfect), indicative and subjunctive: *werfen, mögen, wissen*.

3. Give the second person singular of *schlagen* in all tenses, indicative and subjunctive modes, active and passive voice.

4. Decline throughout: *der älteste Herr, unser liebes, kleines Dorf, manche schöne Rose*.

5. Give nominative and genitive singular and nominative plural with corresponding form of the definite article of: *Blätter* (a, 1), *Walde* (a, 1), *Luft* (a, 3), *Rabe* (a, 4), *Entlein* (a, 6), *Vögel* (a, 8), *Strecke* (b, 2).

6. Explain difference in meaning of *als, wenn* and *wann*; illustrate difference of use in three German sentences.

IV

Complete the following sentences:

1. Das Bild hängt — — Wand.
2. Ich blieb — Hause; er ging — — Stadt.
3. Er fürchtet sich — — Feinde.
4. Er ritt durch — Dorf und über — Brücke.
5. Er stand neben — Fenster und blickte — — Nacht hinaus.

V

Folgende Fragen sind auf deutsch in ganzen Sätzen zu beantworten:

1. Was ist ein Rabe ?
2. Beschreiben Sie einen Schwan !
3. Was ist ein Greis ?
4. Warum wünschte sich der Greis den Tod ?
5. Warum war der Greis erschrocken ?
6. Was lehrt uns die Geschichte von dem Greise und dem Tode ?
7. Welche Jahreszeit ist der Herbst ?
8. Wann sind Sie geboren ? (Write out numbers).

VI

Translate into German :

A few years ago I visited a friend in a little village in Germany. We had gone to the same school but had not seen each other for ten years. When I arrived in front of the hotel, I saw that my friend was waiting for me. He said "I am very glad to see you again ; you must stay with us at least a month."

VII

(Only for those not taking the oral test ; compare I).

(a) Beschreiben Sie in 10 einfachen, deutschen Sätzen das Zimmer, worin Sie sich jetzt befinden !

or

(b) Paraphrase the following poem in simple German prose.

Der Ruckuck und der Esel
Die hatten großen Streit,
Wer wohl am besten fänge
Zur schönen Maienzeit.
Der Ruckuck sprach: „Das kann ich!“
Und hub gleich an zu schrei'n.
„Ich aber kann es besser!“
Fiel gleich der Esel ein.
Das klang so schön, so lieblich,
So schön von fern und nah:
Sie sangen alle beide:
„Ruckuck, kuckuck, ia.“

SECOND YEAR GERMAN

I

N. B. State where and how long you have studied German.

At the option of the candidate, 20% of the 100% may be counted on an oral test to be given in connection with this paper. Candidates not electing this oral test must answer question VI.

II

Translate into English :

Am Fuß der Alpen im oberen Italien befand sich einst ein altes, einem Grafen gehöriges Schloß, das jetzt ganz verfallen ist. Es war ein Schloß mit hohen und weiten Zimmern, in deren einem einst eine alte franke Frau, die bettelnd vor der Tür gelegen hatte, von der Hausfrau aus Mitleid auf Stroh 5 gebettet worden war. Der Graf, der bei der Rückkehr von der Jagd zufällig in das Zimmer trat, befahl der armen Frau in rauhem Tone, aus der Ecke, in der sie lag, aufzustehen und sich hinter den Ofen zu begeben. Indem die Frau sich erhob, glitt sie auf dem glatten Fußboden aus und fiel so unglücklich hin, daß 10 sie zwar noch mit unendlicher Mühe aufstehen und durch das Zimmer gehen konnte, wie ihr befohlen war, dann aber hinter dem Ofen schreiend niedersank und starb.

Mehrere Jahre nachher kam ein Ritter zu dem Grafen, der das Schloß wegen seiner schönen Lage von ihm kaufen wollte. 15 Der Graf, der sein Schloß gern verkaufen wollte, bat seine Frau, dem Fremden das oben genannte Zimmer, das sehr schön und prächtig eingerichtet war, als Gastzimmer anzubieten. Aber wie erschrocken waren der Graf und die Gräfin, als der Ritter mitten in der Nacht bleich wie der Tod zu ihnen herunterkam und 20 erzählte, daß es in dem Zimmer spuke und daß etwas Unsichtbares mit einem Geräusch, als ob es auf Stroh gelegen hätte, in der Zimmerecke aufgestanden, langsam durch das Zimmer gegangen und hinter dem Ofen niedergesunken sei.

III

The following questions are based on the preceding passage for translation.

1. Give the principal parts and the third person singular present indicative (model : *ich komme, ich kam, ich bin gekommen, er kommt*) of the following verbs : *gelegen* (5),

trat (7), *befahl* (7), *aufzustehen* (8), *anzubieten* (18), *schreiend* (13), *sich erhob* (9), *niedergesunken* (24).

2. Conjugate in the present indicative and subjunctive modes: *konnte* (12), *wollte* (15).

3. Decline throughout the singular and plural: *ein altes Schloss* (1-2), *dem Fremden* (17).

4. Explain the construction: *in deren einem* (3-4), *wie ihr befohlen war* (12).

5. Change lines 21-24 (*dass — sei*) into direct discourse.

IV

Beschreiben Sie in sechs deutschen Sätzen von mindestens sechs Worten den Wert irgend eines Haustieres.

V

Translate into German:

Good morning! You are up early. I hope you slept well.

Fairly well. In the middle of the night I woke up because some men were shouting in the street; and when the sun rose the birds began to sing in the trees just above my window.

I am really sorry. But I did not think it was so easy to wake you up. Let us take a little walk in the garden, till breakfast is ready.

Yes, I should like to see your garden. It was too late to go down there last night. You have got some fine trees. What a magnificent oak this is! It must be a hundred years old, at least.

VI

(Not to be answered by candidates electing the oral test).

Beschreiben Sie in zwölf deutschen Sätzen von mindestens sechs Worten Ihre Heimatstadt oder Ihr Heimatdorf.

THIRD YEAR GERMAN

N. B. State where and how long you have studied German.

I

At the option of the candidate, 30% of the 100% may be counted on an oral test to be given in connection with this paper. Candidates not electing this oral test must answer question VI.

II

Translate the following passages :

A. Antonio Biachi, ein wohlhabender Kaufmann in Rom, war genötigt, in seinen Handelsgeschäften zuweilen große Reisen zu machen. Er pflegte dann gewöhnlich seine junge Frau unter dem Schutze ihrer Verwandten zurückzulassen. Eine dieser Reisen führte ihn mit seinem Sohne Paolo, einem elfjährigen Knaben, seinem einzigen Kinde aus erster Ehe, nach einer Stadt an der Küste Dalmatiens. Es traf sich, daß hier eben eine pestartige Krankheit ausgebrochen war, welche die Stadt und Gegend umher in die schlimmste Angst versetzte. Biachi, dem die Nachricht davon erst auf der Reise zu Ohren gekommen war, hielt in der Nähe an, um Genaueres zu erfahren. Da er hier nun hörte, daß das Übel von Tage zu Tage bedenklicher werde und daß man schon beschlossen habe, die Tore zu sperren, so überwand die Sorge für seinen Sohn alle kaufmännischen Interessen: er nahm Pferde und reiste wieder ab.

Er bemerkte, als er im Freien war, einen Knaben neben seinem Wagen, der die Hände bittend zu ihm ausstreckte und in großer Not zu sein schien. Biachi ließ halten; und auf die Frage, was er wolle, antwortete der fremde Knabe in seiner Unschuld: er sei angesteckt (*infected*) und man verfolge ihn schon, um ihn ins Krankenhaus zu bringen, wo sein Vater und seine Mutter schon gestorben seien; er bitte ihn, sich seiner zu erbarmen und ihn mitzunehmen, damit er nicht in der Stadt elendiglich umkommen müsse. Dabei faßte er des Kaufmanns Hand und drückte und küßte sie weinend. Biachi wollte, in der ersten Regung des Entsetzens, den Jungen weit von sich schleudern; doch da dieser, in eben diesem Augenblick, seine Farbe veränderte und ohnmächtig auf den Boden niedersank, so regte sich des guten Mannes Mitleid: er stieg mit seinem Sohne aus, legte den Jungen in den Wagen, und fuhr mit ihm fort, obwohl er nicht wußte, wo er ihn unterbringen könnte.

B. Der neue Präsident, Abraham Lincoln, war einer der Männer des Westens, wo der Ackerbau die Hauptrolle spielt. Im Jahre 1809 im Staate Kentucky als Sohn eines Farmers geboren, war er unter harter Arbeit bei unvollkommenem Schulunterricht aufgewachsen. Später hatte er seine Bildung durch einige juristische Studien ergänzt und war ein ausgezeichnete Advokat geworden. Ein Mann von Genie war er wohl kaum,

aber ein ehrlicher, gottesfürchtiger, seiner Pflicht bewußter und der Union treu ergebener Mann. Als solcher hat er sein Vater- 40 land glücklich durch den furchtbarsten Sturm hindurchgeführt, der es jemals bedroht hat. War Washington der Vater, so ist Lincoln der Retter seines Landes geworden.

III

Grammatical questions based on the preceding passages for translation.

1. Give the principal parts, with the auxiliary of the perfect tense, and the third person singular present indicative (model: *weggehen, ging weg, ist weggegangen, geht weg*) of the following verbs: *zurückzulassen* (4), *ausgebrochen* (8), *erfahren* (11), *überwand* (14), *umkommen* (24), *stieg aus* (29), *aufgewachsen* (36).

2. Give, with the definite article in each case, the nominative and genitive singular, and the nominative plural of: *Stadt* (6), *Jungen* (26), *Staate* (34), *Studien* (37), *Pflicht* (39), *Sturm* (41).

3. Decline throughout the singular only: *seinem einzigen Kinde* (6), *großer Not* (17-18).

4. In lines 19 to 24 change the indirect discourse to what the boy actually said.

5. Substitute a different construction for *War Washington der Vater* (42) and state the rule of word order applying in this case.

6. Give and explain the case of *Wagen* (17), *seiner* (22), *Union* (40).

IV

Write to a friend, addressing him or her in the second person singular, a German letter of about 75 words, properly dated and signed, in which you ask for the return of a certain book and explain why you must have it back immediately.

V

Translate into German:

Several friends visited me yesterday and we spent a very pleasant afternoon. They asked me to take a long walk with them next Sunday but I told them that I should not

be here, because I intended to drive out to my grandfather's country house. "And are you going to return in the evening?" asked Otto. "Yes," I replied, "unfortunately I must be back here, because I must help my father in the garden Monday morning. "That's splendid," said Otto, "for if you had not (*müssen*) to come back the same day, I could not ask you to invite us to go along. For we have work for Monday too, just like you." Then I remembered that my grandfather had written me I might bring some friends with me and I laughingly told Otto how glad I was that he had reminded me of that invitation. "Well, you know," he replied quite seriously, "I was only thinking of you. You would have been so lonely without us."

VI

(Only for those who do not take the oral test).

Write an exercise of about 75 words on one of the following topics: *Die Bedeutung der Weltausstellung in San Francisco* or *Meine ersten Eindrücke in Ithaca und Cornell*.

FIRST YEAR FRENCH

I. Pronunciation.

II. Conjugate the following verbs :

avoir—past definite ;—*joindre*—imperfect subjunctive ;
savoir—imperfect indicative ; *lever*—conditional ; *vouloir*—
present subjunctive ; *envoyer*—future ; *devoir*—present in-
dicative ; *mourir*—pluperfect subjunctive.

Write a complete synopsis of the following : *être*, in the 3rd singular ; *changer* in the 1st plural ; *faire* in the 3rd plural ; *recevoir* in the 2nd singular.

III. Translate into French :

1. I gave it to him yesterday, but he has not yet given it to you.
2. Here are some good apples. I like apples very much.
3. He knows what it is.
4. Here are the flowers which we have bought, and there are more on the table.

5. These books are not the ones you were speaking of.
6. Your mother has come, has she not?
7. Is that book your brother's? No, it is mine.
8. Which of these pens do you wish?
9. How old is she? She is older than I am.
10. Who spoke to you of it, he or I?
11. He will go the first of October at half-past eight in the morning.
12. In Paris, English is spoken in all the large shops.

IV Translate :

(a) L'homme reprit d'une voix étonnée : ' Une petite fille ! ' puis il me demanda d'où je venais, où j'allais, et ce que je voulais.

Je n'avais pas prévu toutes ces questions, et je nommai la ferme que je venais de quitter ; mais je mentis en disant que j'allais retrouver ma mère qui était malade, et je le priai de vouloir bien me faire entrer dans sa maison pendant la pluie. Il me dit d'attendre, et je l'entendis causer avec une autre personne ; puis il revint à la fenêtre pour me demander si j'étais seule. Il voulut aussi savoir mon âge, et quand je dis que j'avais treize ans il trouva que je n'étais pas peureuse d'avoir traversé le bois pendant la nuit.

Il resta un moment penché comme s'il espérait voir mon visage que je tenais levé vers lui ; puis il tourna la tête à droite et à gauche en cherchant à voir dans la profondeur du bois ; et il me conseilla de marcher encore un peu, en m'assurant qu'il y avait un village au bout de la forêt, et que je trouverais des maisons où je pourrais me sécher.

(b) L'oncle me regardait tout surpris ; il comprit sans doute ce que j'avais souffert en songeant qu'il fallait me séparer de Scipio, car, au lieu de faire des observations à madame Thérèse sur le sacrifice qu'elle s'imposait, il dit simplement : J'accepte, madame Thérèse, j'accepte pour Fritz, afin qu'il se souvienne combien vous l'avez aimé ; qu'il se rappelle toujours que, dans le plus grand chagrin, vous lui avez laissé, comme marque de votre affection, un être bon, fidèle, non seulement votre propre compagnon, mais encore celui du petit Jean, votre frère ; qu'il ne l'oublie jamais et qu'il vous aime aussi.

SECOND YEAR FRENCH

I. Pronunciation.

II. *Translate into French :*

1. I am glad that he has spoken to you about it.
2. If he had done what he promised I should not have lost so much time.
3. I shall tell him that he may go when he has finished his work.
4. He gave it to me yesterday saying : " Do not give it to her."
5. You must not go away before he returns.
6. We have been here for three hours, and now it is time to go home.
7. He told me what he wanted without my being able to tell him who I was.
8. I am looking for the books I left in this room. Are these the ones you wish ?
9. If it should rain tomorrow we should not be able to go.
10. Is there anyone here who can tell me the name of the street in which Dr. X. lives ?
11. Although he is only ten years old, he already knows more French than I do.
12. He is going to leave on the first of June and will return on the 18th of July.
13. It is very hot to-day and I am hot, but I think it will be cooler this evening.
14. He asked me for some books, but I told him I had none.
15. Whatever you do, don't ever repeat it to anyone.

III. *Translate :*

Pendant son séjour à Sainte-Hélène Napoléon aimait à *considérer* l'ensemble de son règne, et il *disait* qu'en consultant les annales du monde, en *prenant* l'histoire des fondateurs de dynastie, on n'en trouvait pas de plus inno-

cent que lui. Effectivement, il n'en *est* pas à qui l'histoire *ait* moins à reprocher, sous le rapport des moyens employés pour écarter des parents ou des rivaux, et il est certain qu'excepté les champs de bataille, où l'effusion du sang humain fut immense, personne n'avait moins versé de sang que lui, ce qui était *dû* à son caractère personnel et surtout aux mœurs de son temps. Se comparant à Cromwell, Je suis monté, disait-il souvent, sur un trône vide, et je n'ai rien *fait* pour le *rendre* vacant. Je n'y suis arrivé que porté par l'enthousiasme et la reconnaissance de mes contemporains. — Cette assertion était rigoureusement vraie. Pourtant, de ce trône où il avait été porté par une admiration si unanime, Napoléon était tombé avec autant d'éclat qu'il y était monté. Certes la trahison, qu'il niait lui-même, ne *pouvait* être une explication de cette chute ; il *fallait* la chercher dans ses fautes, et sur ces fautes il était quelquefois sincère, quelquefois sophistique, selon que les aveux à faire coûtaient plus ou moins à son orgueil.

Give the principal parts, including the 1st person singular of the future indicative and present subjunctive, of the verbs in italics in the above passage. Write a complete synopsis of the following verbs : *aller* in the 3rd plural ; *placer* in the 1st plural ; *recevoir* in the 3rd singular ; *venir* in the 2nd plural.

IV Give the feminine of *boeuf nouveau*, *franc* ; *tardif oncle*, *vieil*. The plural of *corail* ; *chou* ; *ciel* ; *bleu* ; *rival* ; *trou*. Give a list of the possessive adjectives and pronouns.

V *Translate :*

Pendant ce temps-là, le siège avançait toujours. C'était le moment du grand froid, du bombardement, des épidémies, de la famine. Mais, grâce à nos soins, à nos efforts, à l'infatigable tendresse qui se multipliait autour de lui, la sérénité du vieillard ne fut pas un instant troublée. Jusqu'au bout je pus lui avoir du pain blanc, de la viande fraîche. Il n'y en avait que pour lui, par exemple ; et vous ne pouvez rien imaginer de plus touchant que ces déjeuners de grand-père, si innocemment égoïstes, — le vieux, sur son lit, frais et riant, la serviette au menton, près de lui sa petite-fille, un peu pâlie par les privations, guidant ses

main, le faisant boire, l'aidant à manger toutes ces bonnes choses défendues. Alors animé par le repas, dans le bien-être de sa chambre chaude, la bise d'hiver au dehors, cette neige qui tourbillonnait à ses fenêtres, l'ancien cuirassier se rappelait ses campagnes dans le Nord, et nous racontait pour la centième fois cette sinistre retraite de Russie où l'on n'avait à manger que du biscuit gelé et de la viande de cheval.

“ Comprends-tu cela, petite ? nous mangions du cheval ! ”

Je crois bien qu'elle le comprenait. Depuis deux mois, elle ne mangeait pas autre chose. De jour en jour cependant, à mesure que la convalescence approchait, notre tâche autour du malade devenait plus difficile.

THIRD YEAR FRENCH

I. *Translate* : L'accord fut aussi complet entre le caractère de l'écrivain et l'esprit de son temps. Miroir fidèle et mobile, Beaumarchais refléta tout ce qui l'entourait en de vives et rapides images ; passionnant l'opinion, passionné par elle, il en recevait des impressions qu'il lui rendait aussitôt plus fortes et plus profondes. Sans être un Voltaire ou un Jean-Jacques, il termina leur oeuvre ; il lança l'esprit du temps, d'une impulsion décisive, vers le but marqué par ses devanciers. De leurs prémisses, il tira des conclusions et, comme l'a dit Girardin, “ il appliqua les idées aux choses. ” Ses confrères étaient de leur temps, eux aussi, mais ce n'étaient que des auteurs. Plus ou moins cantonnés dans leur profession, ils avaient un champ d'observation restreint, et, les yeux fixés sur des modèles mal compris, ils songeaient plutôt à égaler en imitant qu'à créer des modèles nouveaux. Beaumarchais, au contraire, homme universel, fit dans la littérature des incursions de conquérant, mais il ne s'y établit jamais à demeure. S'il imita, ce fut d'une manière originale et, puissant surtout dans son propre fonds, il mit au théâtre lui-même ses aventures, les idées du jour. De cette poétique inconsciente, il tira des chef-d'oeuvre sans précédents.

—LARROUMET, *Beaumarchais*.

Charles X fut envers elle d'une bienveillance attentive et tendre. Que de fantômes évoquait l'aspect de cette chouanne qui le contemplait avec amour, de ses vieux yeux pleins de larmes. Elle qui n'avait plus rien et pouvait beaucoup demander, sollicita une seule récompense : elle voulait le portrait du roi. Il se trouva un chambellan pour remarquer que cette faveur était exclusivement accordée aux ambassadeurs et aux généraux : Mme. Gasnier pouvait d'ailleurs formuler tout autre voeu qui serait à l'instant exaucé ; elle répondit que lorsqu'elle risquait sa vie pour la cause royale, elle s'inquiétait peu de savoir " si elle jouait le rôle d'un général ou d'un ambassadeur." Charles X, amusé de la riposte, accorda le portrait ;—le préférerait-elle " en habits royaux ou en commandant de la garde nationale ? " Ce à quoi elle répondit " qu'elle s'était dévouée au roi de France et non au commandant de la garde nationale."

—LENOTRE, *Vieilles maisons, vieux papiers*.

II. *Translate* : c'est trop fort, c'est on ne peut mieux, il y a quelque chose là-dessous, vous arrivez à propos, s'il ne tenait qu'à moi cela serait bientôt fait, il fait le malin, il a ri au nez de cet homme, il m'en voulait, il ne pouvait venir à bout de le faire.

III. *Translate* : A clever French author made a book some years ago called The Forty-first Armchair. It consists of brief biographies of the most famous writers of France, not any of whom have been members of the Academy. The astonishment of the stranger who is told that neither Molière nor Balzac was ever embraced among the " Forty Immortals " is very much like that which often affects the tourist who, searching among the illustrious names and faces which makes this Abbey glorious, has asked in vain for the author of Waverley. It is not that he has ever been forgotten or neglected. His spirit is everywhere ; he is revered wherever the English speech has traveled.

IV. Give the principal parts (including the first person singular of the future and the present subjunctive) of *résoudre, conquérir, clore, éteindre, moudre, croître, pleuvoir*.

V. Write in French a letter of about 200 words describing a journey which you have recently made.

VI. *Translate* Tell him to come at once, although as yet I can promise him nothing. Of what use are friends if they do not know how to be sincere in times of trouble? He and she will go there unless their parents prevent them. It is possible they may come but it would be better for you to stay at home. I hope you will have found something good before you see them. He who hesitates is lost.

FIRST YEAR SPANISH

I. Give the singular of the following: *veces, alegres, manos, azules, fraques, canciones*.

II. What are the rules for the position and relative order of the personal object pronouns?

III. Conjugate the following tenses:

(a) Present indicative of *vencer, haber*.

(b) Imperfect indicative of *ser, llegar*.

(c) Preterite of *tener, vivir*.

(d) Present subjunctive of *sentarse, venir*.

(e) Future indicative of *estar*.

(f) Conditional of *deber*.

IV Translate:

1. They say that his father is not well.
2. Your brother is a doctor; mine is a teacher.
3. Which one of the books do you want?—The one you gave me yesterday morning.
4. What time is it? It is half past ten.
5. Please bring me some cold water; it is very hot here.
6. I shall send it to you at once.
7. What is the largest city in the world?
8. The door was open but he did not enter the room.
9. When we were in Madrid a year ago, we met a friend of yours.
10. Let's go to bed early tonight.

V Translate :

Fuimos, pues, continuando con nuestro método favorito, y en pocas semanas dejamos más viudas y huerfanos que el famoso sitio de Troya. Parecía que había entrado la peste en Valladolid : tantos eran los entierros que se veían. Todos los días se presentaba en nuestra casa un padre que nos pedía un hijo, á quien habíamos echado á la sepultura, ó un tío que se quejaba de que hubiésemos muerto á su sobrino ; pero nunca veíamos á ningún sobrino ó hijo que viniese á darnos las gracias porque con nuestros remedios habíamos dado la salud á su padre ó á su tío. Por lo que toca á los maridos, también eran prudentes ; pues ninguno vino á lamentarse de nosotros porque hubiese perdido á su mujer. Con todo eso, algunas personas verdaderamente afligidas venían tal vez á desahogar con nosotros su pena.

VI. Translate :

Sucedió pues, que una tarde, á la hora de la siesta, se presentó un mozo en casa de D. Ventura, diciendo que le siguiera inmediatamente porque había un hombre que se estaba ahogando. D. Ventura se levantó en seguida, se puso el sombrero y salió á la calle.

—¿ De qué se trata ?—preguntó.

—Se trata,—contestó el mensajero—de que en el tren que ha venido de Madrid hay un señor muy enfermo.

—¿ De Madrid, dices ?

—Sí, señor ; es un viejo grueso, muy simpático.

Llegaron á la estación del ferrocarril ; D. Ventura, más muerto que vivo al ver acercarse el momento que tanto había temido, atravesó el grupo de curiosos reunidos en torno del paciente y llegóse á éste.

¡ Oh sorpresa á nada comparable ! El enfermo que en aquellos instantes reclamaba su ayuda con tanta urgencia, era el mismísimo Rector de San Carlos, su antiguo amigo y maestro.

SECOND YEAR SPANISH

I. Dictation.

II. Conjugate the following tenses :

- (a) Present indicative of *poner, seguir*.
- (b) Imperfect indicative of *andar, saber*.
- (c) Future indicative of *decir*.
- (d) Preterite of *dormir, traducir*.
- (e) Present subjunctive of *sentarse, salir, hacer*.

III. (a) What are some of the ways of expressing a passive idea in Spanish?

(b) Give a list of the interrogative pronouns and adjectives.

(c) What kinds of ideas will the Spanish express in the subjunctive?

(d) Illustrate the distinction between the indicative and the subjunctive in relative clauses by means of examples.

IV Translate :

1. I am glad that you can send it to him.
2. It is already half past nine.
3. Let's go to bed early tonight.
4. What is that gentleman's name?—Why, man alive, don't you know Mr. Huerta?
5. His sister is twenty-one years old, but she is not as good-looking as he is.
6. If you can find a long, interesting novel, send it to me.
7. What is the largest city in Peru?
8. My friend's mother has been ill for several months.
9. He has just returned from Mexico.
10. Please open the window ; it is very hot in this room.

V Translate :

—Si me conocieras, como yo creo conocerte á tí, sabrías que jamás digo sino lo que siento. Pero dejémonos de sutilezas tontas y de argucias de amantes, que no conducen

sino á falsear los sentimientos. Yo no hablaré contigo más lenguaje que el de la verdad. ¿Eres acaso una señorita á quien he conocido en el paseo ó en la tertulia, y con la cual pienso pasar un rato divertido? No. Eres mi prima. Eres algo más. Rosario, pongamos de una vez las cosas en su verdadero lugar. Fuera rodeos. Yo he venido aquí á casarme contigo.

Rosario sintió que su rostro se abrasaba y que el corazón no le cabía en el pecho.

—PÉREZ GALDÓS.

VI. Translate :

Fué una época feliz para María. Tenía entonces diez y seis años, y el pensamiento inquieto y atrevido. La música, en la cual había hecho prodigiosos adelantos, había fomentado en su corazón cierta tendencia á la melancolía y al llanto. Lloraba por cualquier cosa ; á veces sin motivo alguno y cuando menos se esperaba ; pero las lágrimas eran tan dulces y sentía con ellas placer tan intenso, que en muchas ocasiones las provocaba con artificio. ¡ Cuántas veces había atormentado á su padre con lloro intempestivo, cuya causa no acertaba á decir porque no la sabía ella misma ! El conocimiento de la pintura, en la cual también había descollado, despertó su inclinación hacia la luz y el paisaje, lo cual contribuyó asimismo á que solicitase con ardor las habitaciones de la torre.

—VALDÉS.

THIRD YEAR SPANISH

I. Write in Spanish a brief summary of some story or play which you have read recently.

II. Translate into Spanish :

At noon on the 4th of November the sun was really hot in our plaza ; but we were instructed that before the winter was over there would be cold enough. I wish I could tell how the people live then in their beautiful, cool houses, but I do not know, and I do not know how they live at any season except from the scantiest hearsay. The women remain at home except when they go to church or to drive in

the Delicias—that is to say, the women of society, of the nobility. There is no society in our sense among people of the middle classes ; the men when they are not at business are at the café ; the women when they are not at mass are at home.

—W. D. HOWELLS.

III. Name five novelists and five dramatists of the nineteenth century in Spain.

IV. What works, other than novels, have you read in Spanish ?

V. Translate :

Andábame días pasados por esas calles á buscar materiales para mis artículos. Embebido en mis pensamientos, me sorprendí varias veces á mi mismo riendo como un pobre hombre de mis propias ideas y moviendo maquinalmente los labios ; algún tropezón me recordaba de cuando en cuando que para andar por el empedrado de Madrid no es la mejor circunstancia la de ser poeta ni filósofo ; más de una sonrisa maligna, más de un gesto de admiración de los que á mi lado pasaban, me hacía reflexionar que los soliloquios no se deben hacer en público ; y no pocos encontrones que al volver las esquinas dí con quien tan distraída y rápidamente como yo las doblava, me hicieron conocer que los distraídos no entran en el número de los cuerpos elásticos, y mucho menos de los seres gloriosos é impasibles.

—LARRA.

VI. Translate :

Tu pupila es azul, y cuando ríes,
 Su claridad süave me recuerda
 El trémulo fulgor de la mañana
 Que en el mar se refleja.
Tu pupila es azul, y cuando lloras,
Las transparentes lágrimas en ella
Se me figuran gotas de rocío
Sobre una violeta.
 Tu pupila es azul, y si en su fondo
 Como un punto de luz radia una idea,
 Me parece en el cielo de la tarde
 ¡ Una perdida estrella !

—BECQUER.

VII. Translate :

Catalina y Martín se encontraban muchas veces y se hablaban ; él la veía desde lo alto de la muralla en el mirador de la casa, sentadita, muy formal, jugando ó aprendiendo á hacer media. Ella siempre estaba oyendo hablar de las calaveradas de Martín.

—Ya está ese diablo ahí en la muralla—decía doña Agueda.—Se va á matar el mejor día. ¡ Qué demonio de chico ! ¡ Qué malo es !

Catalina ya sabía que diciendo ese demonio ó ese diablo, se referían á Martín.

Carlos alguna vez le había dicho á su hermana,

—No hables con ese ladrón.

—BAROJA.

FIRST YEAR ITALIAN

1. Give the preterite of *dar, uscire, parere, trarre* ; the present subjunctive of *valere, andare, porre, udire* ; the perfect indicative of *aprire, dire, venire, potere, stare*.

2. Translate into Italian :

He put it on the table, but some one has moved it. Who is going there to-day ? Either he or I wanted to give it to him but I couldn't. They woke me at five o'clock. It was dark and cold, and it was snowing hard. Victor Emmanuel II was the first king of the Third Italy. If I saw him I would have to speak to him. Go and ask him why he didn't read what I wrote. If *he* were here, perhaps he would be able to tell us if Alfieri was a count. Then they looked at each other and began to weep. Go tell them they'll have to do without me. You ought to do something for him instead of letting him suffer so. He must have known them well ; he has lived there for several years. I came I saw I conquered.

3. Translate into English :

Venerdì 15 febbraio 1823 fui a visitare il sepolcro del Tasso e ci piansi. Questo è il primo e l'unico piacere che

ho provato in Roma. La strada per andarvi è lunga, e non si va a quel luogo se non per vedere questo sepolcro; ma non si potrebbe anche venire dall' America per gustare il piacere delle lagrime lo spazio di due minuti? E pur certissimo che le immense spese che qui vedo fare non per altro che per procurarsi uno e un altro piacere, sono tutte quante gettate all'aria, perchè in luogo del piacere non s'ottiene altro che noia. Molti provano un sentimento d'indignazione vedendo il cenere del Tasso, coperto e indicato non da altro che da una pietra larga e lunga circa un palmo e mezzo, e posta in un cantoncino d'una chiesuccia. Io non vorrei in nessun modo trovar questo cenere sotto un mansoleo. Tu comprendi la gran folla di affetti che nasce dal considerare il contrasto fra la grandezza del Tasso e l'umiltà della sua sepoltura. Ma tu non puoi avere idea d'un altro contrasto, cioè di quello che prova un occhio avvezzo all' infinita magnificenza e vastità de' monumenti romani, paragonandoli alla piccolezza e nudità di questo sepolcro. Si sente una trista e fremebonda consolazione pensando che questa povertà è pur sufficiente ad interessare e animar la posterità, laddove i superbissimi mansolei, che Roma racchiude, si osservano con perfetta indifferenza per la persona a cui furono innalzati, della quale o non si domanda neppure il nome, o si non domanda non come nome della persona ma del monumento. Leopardi.

SECOND YEAR ITALIAN

1. Translate into English :

Il nonno ora stava meglio, e lo mettevano sull'uscio, al sole, avvolto nel tabarro, e col fazzoletto in testa, che sembrava un morto risuscitato, tanta che la gente andava a vederlo per curiosità ed il poveraccio chinava il capo a questo e a quello, come un papagallo, e sorrideva, tutto contento di trovarsi là, nel suo cappotto, accanto all'uscio, con Maruzza che gli filava accanto, il telaio della Mena che si udiva nelle stanze, e le galline che razzolavano nella strada. Ora che non aveva altro da fare aveva imparato a conoscere le galline ad una ad una, e stava a vedere quello

che facevano, e passava il tempo ad ascoltare le voci dei vicini dicendo :—Questa è comare Venera che strappazza suo marito.—Questa è la cugina Anna che torna dal lavatoio.—Poi se ne stava a vedere l'ombra delle case che si allungava ; e quando non c'era più il sole sulla porta lo mettevano contro il muro dirimpetto, ch'egli somigliava al cane di mastro Tuni, il quale cercava il sole, per sdraiarsi. Infine, cominciò a stare sulle bambe e lo portarono sulla riva, reggendolo sotto le ascelle, perchè gli piaceva dormicchiare accoccolato sui sassi, in faccia alle barche, e diceva che l'odore dell'acqua salata gli faceva bene allo stomaco ; e si divertiva a veder le barche, e sentire com'era andata la giornata per questo e per quello. I compari, mentre attendevano alle loro faccende, gli regalavano qualche parola, e gli dicevano per consolarlo : Vuol dire che c'è olio ancora alla lucerna, eh, padron 'Ntoni?

2. Give imperfect subjunctive of *stava* the preterite of *avvolto* and of *dicendo* ; present and perfect subjunctive of *andava* ; imperfect subjunctive and conditional of *fare* preterite and pluperfect indicative of *mettevano*.

3. Translate into Italian :

ALEXANDER AND THE PIRATE

Alexander the Great one day asked a pirate, who had been made prisoner, what right he believed he had to infest the seas. "The same," replied the pirate, "as you have to plunder the universe ; but because I act as a corsair, having only one small ship, I am considered an assassin, while you who do it with a powerful fleet have the name of a conqueror. On account of the wise and witty answer of the pirate, Alexander spared his life, and gave him the position of Admiral in his own fleet. This is an example of the great magnanimity of the first conqueror of the world that ever was.

3. Translate :

Deh peregrini, che pensosi andate
Forse di cosa che non v'è presente,
Venite voi di sì lontana gente,
Come alla vista voi ne dimostrate ?

Che non piangete, quando voi passate
 Per lo suo mezzo la città dolente,
 Come quelle persone, che niente
 Par che intendesser la sua gravitate.
 Se voi restate, per volerla' udire,
 Certo lo core ne, sospir mi dice,
 Che lagrimando n'uscirete pui.
 Ella ha perduta la sua Beatrice
 E le parole, ch'uom di lei può dire,
 Hanno virtù di far piangere altrui.

THIRD YEAR ITALIAN

1. Translate :

Ascoltando, chinai in giù la faccia ;
 Ed un di lor (non questi che parlava)
 Si torse sotto il peso che lo impaccia :
 Ed videmi e conobbemi e chiamava,
 Tenendo gli occhi con fatica fisi
 A me, che tutto chin con loro andava.
 'O' dissi lui, non sei tu Oderisi,
 L'onor d'Agobbio, e l'onor di quell'arte
 Che alluminare chiamata è in parisi ?'
 'Frate' diss' egli, 'più ridon le carte
 Che pennelleggia Franco Bolognese :
 L'onore è tutto or suo, e mio in parte.
 Ben non sare' io stato sì cortese
 Mentre ch' io vissi, per lo gran desio
 Dell' eccellenza, ove mio core intese.
 Di tal superbia qui si paga il fio ;
 Ed ancor non sarei qui, non fosse
 Che, possendo peccar, mi volsi a Dio.
 O vanagloria dell' umane posse,
 Com' poco verde in sulla cima dura,
 Se non è giunta dall' etati grosse !
 Credette Cimabue nella pittura
 Tener lo campo, ed ora ha Giotto il grido
 Sì che la fama di colui è oscura.
 Così ha tolto l'uno all' altro Guido
 La gloria della lingua ; e forse è nato

Chi l'uno e l'altro cacerà di nido.
Non è il mondan romore altro che un fiato
Di vento, che or vien quinci ed or vien quindi,
E muta nome, perchè muta lato.

(DANTE, PURG. XI, 73-102.)

(b.) Verso gli uomini grandi, e specialmente verso quelle in cui risplende una straordinaria virilità, il mondo è come donna. Non gli ammira solo, ma li ama, perchè quella loro forza l'innamora. 'Spesso, comme nelle donne, l'amore verso questi tali è maggiore per conto ed in proporzione del disprezzo che essi mostrano, dei mali trattamenti che fanno, e delle stesso timore che ispirano agli uomini. Così Napoleone fu amatissimo dalla Francia, ed oggetto, per dir così, di culto ai soldati che egli chiamò carne di cannone, e trattò come tali. Così tanti capitani che fecero degli uomini simile giudizio ed uso, furono carissimi ai loro eserciti in vita, ed oggi nelle storie fanno invaghire di sè i lettori. Anche una sorte di brutalità e di stravaganza piace non poco in questi tali, comme alle donne negli amanti. Però Achille è perfettamente amabile: laddove la bontà di Enea e di Goffredo, e la saviezza di questi medesimi e di Ulisse, generano quasi odio.

LEOPARDI, *Pensieri*.

2. Translate into Italian: From Naples, Addison returned to Rome by sea, along the coast which his favorite Virgil had celebrated. The felucca passed the headland where the car and trumpet were placed by the Trojan adventurers on the tomb of Misenus, and anchored at night under the shelter of the famed promontory of Circe. The voyage ended in the Tiber, still overhung with dark verdure, and still turbid with yellow sand, as when it met the eyes of Aeneas. From the ruined port of Ostia, the stranger hurried to Rome; and at Rome he remained during those hot and sickly months when, even in the Augustan age, all who could make their escape fled from mad dogs and from streets black with funerals, to gather the first figs of the season in the country. It is probable that, when he, long after, poured forth in verse his gratitude to the Providence which had enabled him to breathe unhurt in tainted air, he was thinking of the August and September which he had passed at Rome.

MACAULAY, *Essay on Addison*.

ANCIENT HISTORY

Preparation.

1. Where have you studied this subject?
2. How long have you studied it?
3. What text-book or text-books did you use?
4. What else have you read on this subject or on any part of it?
5. Are you seeking a unit or a half unit of credit?

Note. If you are trying for only a half unit of credit, answer any *five* questions in Greek History or any *five* questions in Roman History.

I. *Oriental History.* (Answer 1 or 2).

1. What do you know about the government, the industries, the science and the religion of ancient Egypt?
2. Give an outline of the history of the Assyrians and describe some characteristic specimens of their art.

II. *Greek History.* (Answer two questions).

1. Locate Cnossus, Troy, and Mycenae, and tell what you can about the results of excavations at each of these sites.
2. Where is Sparta? How do you account for the Spartan system of education? Tell what you can about the Peloponnesian League and about the part that Sparta played in the great war with Persia.
3. How were laws made at Athens during the age of Pericles? How were law-suits tried and decided at Athens? What do we mean by the Athenian Empire, how was it formed, and how was it destroyed?

III. *Greek History.* (Answer two questions.)

1. Where is Syracuse? When and how did Dionysius I become its ruler? What did he accomplish? How was his work undone?
2. How did Philip of Macedon come into conflict with

Athens, and with what result? What was the extent of his power at the time of his death? Name a city that he founded. What do you think about the assertion made by a Greek historian to the effect that Europe had never before seen a man so great as Philip?

3. How did Ptolemy I become King of Egypt? Tell what you can about the city of Alexandria. Who were the Seleucidae? Who were the Maccabees?

4. Describe the Parthenon. Describe a Greek theatre. Tell what you can about three of the following: Phidias, Thucydides, Euripides, Aristotle, Euclid.

IV. *Roman History.* (Answer two questions.)

1. How did the Romans get their alphabet? Where was Etruria? Explain the significance of the tribunate, the Twelve Tables, and the Samnite Wars.

2. Locate the Roman province of Africa. Explain how it came to be annexed to the Roman Empire. Locate the province of Asia and explain its annexation. Tell what you can about the Roman system of provincial government.

3. How were laws made at Rome in the time of Caius Gracchus? What office did Sulla hold after his return from the East and what use did he make of its powers? What do you know about the so-called First Triumvirate?

V. *Roman History.* (Answer three questions.)

1. Compare Augustus with Julius Cæsar, making clear the contrast between their characteristics, their policies, and their achievements.

2. How did Vespasian become Princeps? What annexations were made by Trajan beyond the frontiers established by Augustus, and with what results? Why did Hadrian visit Britain and why did he build a wall across the island?

3. Tell what you can about the relations between Rome and the Germans (*a*) in the time of Marius, (*b*) during the administration of Augustus, (*c*) in the third century after Christ, (*d*) in the reign of Theodosius I, (*e*) in the fifth century of our era.

4. Describe the Colosseum. Describe the Pantheon. Tell what you can about three of the following : Virgil, Plutarch, Tacitus, Marcus Aurelius, Ulpian.

MEDIEVAL AND MODERN HISTORY

1. Where have you studied this subject ?
2. How long ?
3. With what text-books, and with what other reading, if any ?
4. Are you taking the entire examination, or but half ; and, if but half, the medieval or the modern ?

GROUP I

(Answer one question only.)

1. Write fully on any three of the following persons : Charlemagne (Charles the Great), Innocent III, Dante, Leonardo da Vinci, Marco Polo.
2. Tell how the Swiss won and maintained their freedom.
3. Tell what you can of the beliefs and practices characteristic of the medieval Christian church. Of her chief monastic orders, their founders, and their aims.

GROUP II

(Answer one question only.)

1. What lands during the Middle Ages came under the sway of the Arabs ? From what centres did they rule them, and what can you tell of their government and their civilization ?
2. Tell what you can of Poland, Bohemia, and Hungary during the Middle Ages. Of the Scandinavian peoples. Of the Jews.

GROUP III

(Answer both questions if taking the entire examination.)

1. Locate on the map : Aquitaine, Rhodes, Constance,

Bruges, Canossa, Granada, Salerno, Rouen, the Wartburg, Roncesvalles. Tell in your paper something interesting of which each of these was the scene.

2. Name the chief colonial possessions of England, telling how she came into possession of each. Where is Singapore, St. Helena, Guiana, Natal?

GROUP IV

(Answer one question only.)

1. Name the form of Christian faith dominant in each of the European states at the year 1600, and discuss the reasons for its dominance there.

2. What were the territorial results of the 'Thirty Years' War? What its economic results? What its religious results?

GROUP V

(Answer one question only.)

1. What were the permanent results of the French Revolution in France? In Europe?

2. Name the European wars of the past hundred years, describing the territorial changes brought about by each.

AMERICAN HISTORY AND CIVICS

How many weeks and for how many hours of recitation a week have you studied American History and Civics? What text-books did you use? What other standard works on American History do you know? Describe one of the latter in some detail. Are you seeking a unit or a half unit of credit?

Part I. American History

Write on two questions in the following group:

1. Mention in chronological order the wars in which the English colonists engaged in the interest of the mother country and show how they were related to the wars in

Europe. Mention the results of each of these wars in so far as America was concerned.

2. Describe the settlement of Connecticut with reference to the time and manner of the settlement, the special reasons for it, the leaders, and the first places settled. Mention some of the significant episodes in the history of Connecticut as a colony.

3. What can you say of the history of the Jesuits on the American continent? Where were they active, during the colonial period? What Indian tribes were visited by them? What results?

4. Give an account of the reasons religious, social, and economic that contributed toward the emigration from England to America 1607-1650. Why did Frenchmen not come in equal numbers? or Germans?

Write on two questions in this group :

1. Describe the activities of Gênet in the United States and show in what respects he affronted a neutral nation. What matters of domestic politics made it possible for him to secure adherents in the United States?

2. Discuss the Whiskey Rebellion showing not only the causes, incidents, and results but explaining also what it signifies in the growth of the power of the Federal Government.

3. Name all the incidents you can showing that threats of secession were not peculiar to any section of the United States between 1789 and 1840. Why did the South believe in 1860-61 that it had a constitutional right to secede?

4. Give an account of the events (1819-1845) that led to the annexation of Texas.

Write on two questions in this group :

1. State the terms of the Proclamation of Emancipation, of Jan. 1, 1863. What effect did it have upon slavery in the Border States? What effect elsewhere? Why was it necessary to adopt the Thirteenth Amendment?

2. Why was President Johnson impeached? What was

the process of the impeachment? Why did certain Republican senators vote in Johnson's favor?

3. What measures were employed to give the negro the vote in the Southern States after the War and to prevent him from losing it? What measures were employed by the people of the South to prevent the negro from voting?

Part II. Civics

Write on two of the questions:

1. What is the "short ballot" and what advantages are expected from it. What disadvantages may be urged against it?

2. Explain why the police department of a large city is so often corrupt. How does the police department influence city elections? What methods have been suggested for maintaining an honest police force?

3. What proposals for change are now most frequently suggested to constitutional conventions (*e. g.*, New York Constitutional Convention of 1915) or are submitted by state legislatures for ratification as amendments to state constitutions? Discuss one or more fully.

4. Who is a citizen of the United States according to the Fourteenth Amendment? What races can be naturalized and what is the process of naturalization?

ENGLISH HISTORY

For a credit of one unit answer the required number of questions in each group. For credit of one-half unit answer the required number of questions in each of the first three groups, or in each of the last three groups.

GROUP I

(Answer one question.)

1. Give an account of the reign of Alfred.

2. Tell what you can about the following:

a. Godwin

c. Cnut

b. Egbert

d. Harold.

GROUP II

(Answer two questions.)

1. Give an account of the quarrel between Henry II and Becket. Trace the relations between English kings and the church from that time to the close of the reign of John.

2. Explain the organization and significance of three of the following :

a. Exchequer

c. Craft Gild

b. Manor

d. Chivalry.

3. Give an account of the reign of Edward III.

GROUP III

(Answer one question.)

1. Indicate on the map the boundaries of the French territories in the possession of English Kings (*a*) at the close of the reign of John (*b*) at the close of the reign of Henry V. Locate one battle field of importance in the hundred years' war previous to the treaty of Bretigny and one of importance after that treaty. Give an account of the battles and explain their significance in the examination-book.

2. Locate on the map four of the most important ports in England in the modern period. Were they important ports in the Middle Ages? If not, explain why in the examination-book. Indicate on the map those districts of England which became more thickly populated as a result of the industrial revolution. Locate two of the largest manufacturing towns situated in those districts.

GROUP IV

(Answer two questions.)

1. Name four prominent English statesmen of the eighteenth century. Tell what you can about the life of one of them, and explain briefly one event of importance in the public careers of each of the other three.

2. Explain the causes of the Civil War of the seventeenth century. Trace the course of the war to 1646.

3. Explain how the following persons and events affected the foreign policy of England during the sixteenth century :

- a.* Mary Stuart
- b.* Wolsey
- c.* Counter reformation.

GROUP V

(Answer one question.)

1. How did the French revolution affect England? Why did England go to war with France in 1793? What was Napoleon's Continental System? Explain its results. Name three battles of importance in the war and explain their significance.

2. Tell what you can about three of the following statesmen :

- a.* Sir Robert Peel
- b.* Lord Palmerston
- c.* Lord John Russell
- d.* Parnell.

ELEMENTARY ALGEBRA

1. Multiply $1 + 2x - x^2 - \frac{1}{2}x^3$ by itself, and then find the value of the result if $1 - 2x = 3$.

2. What is the value of $x^3 + y^3$ if

$$x + y = 4$$

and

$$2x^3 + 2y^3 = 17?$$

3. a. Add $\frac{1}{x}$, $\frac{1}{1-x}$, $\frac{3x-1}{(x+1)^2}$ and $\frac{-2}{x+1}$ and express

the result as a fraction in its lowest terms.

b. Rationalize the denominator of

$$\frac{\sqrt{x} - 4\sqrt{x-2}}{2\sqrt{x} + 3\sqrt{x-2}}$$

4. Find a root of $x^2 - x - 1 = 0$, and verify the correctness of the result.

5. Solve the system of equations

$$\begin{aligned} 2x + 4y + 5z &= 19 \\ -3x + 5y + 7z &= 8 \\ 8x - 3y + 5z &= 23. \end{aligned}$$

6. A takes three hours longer than B to walk 30 miles; but if A doubles his pace he takes two hours less than B . Find the rate at which A and B each walk.

7. Find the time between three and four o'clock when the minute and hour hands are opposite each other.

INTERMEDIATE ALGEBRA

1. Solve the following equation for x

$$\frac{2x^2}{x^2 - 1} + \frac{x}{x - 1} = \frac{x}{x + 1} + 3.$$

Checks your results.

2. Solve

$$\begin{aligned} x + y + 2\sqrt{x + y - 1} &= 25 \\ x - y + 3\sqrt{x - y + 1} &= 9. \end{aligned}$$

Check your results.

3. For what values of m will the roots of

$$2m^2 + x^2 - 2mx + 4x - 5m + 4 = 0$$

be real and distinct?

4. Evaluate

$$\frac{(81)^{-\frac{3}{4}} + (-27)^{-\frac{4}{3}}}{3(9)^{-\frac{3}{2}} + (27)^{-1}}$$

5. Find the greatest common divisor of $x^4 + x^3 - x^2 - x$ and $x^4 + 4x^3 + 3x^2 - 4x - 4$. Also find the least common multiple of these polynomials.

6. What is the sum of $1 + 3 + 5 + \dots + (2n - 1)$, n being a positive integer? What is the least odd integer

such that the sum of all the positive odd integers up to and including it will exceed 45370?

7. From a thread whose length is equal to the perimeter of a square, one yard is cut off. The remainder is equal to the perimeter of a square whose area is $\frac{4}{9}$ that of the first. What was the original length of the thread?

ADVANCED ALGEBRA

1. Write the first three terms, and also the eighth term of the expansion of $\left(2a\sqrt{b} - \frac{1}{2a\sqrt{b}}\right)^{13}$ and simplify your results in each case.

2. If the planet Mercury makes a circuit about the sun every 3 months, and Venus makes the circuit every $7\frac{1}{2}$ months, find the number of months between two consecutive times when Mercury is directly between Venus and the sun.

3. (a) State the relations between the roots and the coefficients of a quadratic equation.

(b) Each of two students attempts to solve a quadratic equation. One of them, in reducing, makes an error only in the constant term of the equation and thus finds 8 and 2 as the roots. The other makes an error only in the coefficient of the first degree term, and finds -9 and -1 as the roots. What are the correct roots?

4. By means of determinants solve the following system of simultaneous equations for x , and evaluate the determinants used in the solution ;

$$\begin{aligned} a x + b y &= 1. \\ 2 b y + 3 c z &= 2. \\ 3 c z + 4 d w &= 3. \\ 4 d w + 5 a x &= 4. \end{aligned}$$

5. Seven boys are walking and approach a "fork" in the road. They agree that 4 of them shall follow the right-hand branch of the road, and that the others shall follow

the left-hand branch. In how many different ways can they do this?

6. The volume of a bin $10 \times 12 \times 15$ feet is to be increased by 50 cu. ft. by adding the same amount to each dimension. What should this amount be?

PLANE GEOMETRY

1. Prove that the medians of a triangle meet in a point.
2. In a circle the greater of two chords is the closer to the center, and conversely.
3. If from a point without a circle, a tangent and a secant are drawn, the length of the tangent is a mean proportional between the length of the whole secant and the length of its external segment.
4. Prove that the area of the square constructed on the hypotenuse of a right triangle is equal to the sum of the areas of the squares constructed on the other two sides.
5. The sum of the lengths of the perpendiculars drawn from a point in the base of an isosceles triangle to the other two sides is constant.
6. A line segment of given length is tangent, at one of its extremities, to a given circle. Find, and prove correct, the locus of the other extremity of the segment.
7. Construct, and prove correct, a triangle of given base, given altitude and given angle opposite the base.

SOLID GEOMETRY

1. If a plane contains two of the perpendiculars to a given line at a given point, then the plane contains all the perpendiculars to the line at this point.
2. Find the locus of all points in space equidistant from three points not in a straight line.
3. The volume of any parallelopiped is the product of the area of the base and the altitude.

4. The sum of two face angles of a trihedral angle is greater than the third face angle.

5. Find the area of the zone of a sphere of radius 10 inches which is bounded by circles of radius 8 and 6 inches respectively.

6. Show how to construct a plane, through a given point, parallel to two given lines.

7. A right circular cylinder and a right circular cone each have an altitude of 24 inches and a base whose diameter is 6 inches. Find the radius, and also the area of the surface, of a sphere whose volume is equal to the sum of the volumes of the cone and the cylinder.

PLANE TRIGONOMETRY

1. Express, correct to two places of decimals, 25 radians in degrees and 25 degrees in radians.

2. Prove the identity

$$\tan x + \cot x = 2 \csc 2x.$$

3. Prove from a figure that $\cos(\frac{3}{2}\pi + A) = \sin A$ if A is a positive acute angle.

4. Find all the values of x which are less than 360° and not negative for which

$$2 + \cos x = 2 \sin^2 x.$$

5. Show that

$$\sin(2x + x) = 3 \sin x - 4 \sin^3 x.$$

6. If $a = 120$ ft., $b = 118$ ft., and $c = 116$ ft., find A .

7. One side of a triangle is twice another side and the included angle is 60° . What are the remaining angles?

PLANE AND SPHERICAL TRIGONOMETRY

1. Express, correct to two places of decimals, 25 radians in degrees and 25 degrees in radians.

2. Prove the identity

$$\tan x + \cot x = 2 \csc 2x.$$

3. Prove from a figure that $\cos \left(\frac{3\pi}{2} + A \right) = \sin A$ if A is a positive acute angle.

4. Find all the values of x which are less than 360° and not negative for which

$$2 + \cos x = 2 \sin^2 x.$$

5. If $a = 120$ ft., $b = 118$ ft. and $c = 116$ ft., find A .

6. Derive the theorem of sines for the oblique spherical triangle.

7. In a spherical triangle, if $b = 54^\circ 21'$ $c = 31^\circ 48'$ and $B = 100^\circ 10'$, find C and write down the formulas for finding the remaining parts.

PHYSICS

GROUP A

Answer two questions from this group.

1. What is meant by moment of a force? Describe some device by means of which a body may be lifted by applying a force smaller than the weight of the body. Show the application of the law of moments to this device.

2. About how high can a good suction pump lift mercury from a well exposed to the atmosphere? Why can the same pump lift water higher? Account for the fact that such a pump can not lift liquids to an unlimited height?

3. A body weighing 150 pounds rests on an inclined

plane, the length of which is 15 feet, the height 9 feet, and the base 12 feet. Neglecting friction find :

(a) The force which the body exerts perpendicular to the plane,

(b) The force exerted parallel to the plane,

(c) How much work must be done to move the body from the bottom to the top of the plane?

GROUP B

Answer one question from this group.

4. With the aid of a diagram describe either an experiment for determining the coefficient of linear expansion of a solid or an experiment for finding the heat of fusion of a substance. State what observations should be made and show how you would use the observations to determine the quantity desired. What precautions should be used to make the error in the result small?

5. The hot water which leaves a radiator may be nearly as hot as the steam which entered it. What then is the chief source of heat for warming the room? How does the heat get from the radiator to other parts of the room?

GROUP C

Answer two questions from this group.

6. Given a voltaic cell, a coil of wire, an ammeter, and a voltmeter, how may the resistance of the wire be determined? Show by diagram how the apparatus should be connected.

7. Find the cost at 10 cents per kilowatt hour of using six 40-watt tungsten lamps for 100 hours and an electric flat iron that requires 4 amperes for 30 hours, if the electric pressure is 110 volts.

8. State three effects of an electric current and mention a practical application of each.

GROUP D

Answer one question from this group.

9. Describe fully some experiment you have performed in

light or sound. State explicitly what observations were made and show how these observations were used to obtain your results.

10. Show by diagram how light is bent in passing thru a triangular prism. What factors determine the pitch of a string?

CHEMISTRY

(Entrance credit in chemistry does not carry with it University credit in any course in chemistry in Cornell University. Applicants for University credit in Introductory Inorganic Chemistry, Course I, who have received permission from Mr. Hoy, should take the examination for University credit also being held in this room.)

Answer eight questions only.

(Atomic Weights: $H=1$, $C=12$, $O=16$, $S=32$, $Ca=40$, $K=39$, $Cu=63.6$).

1. Define (*a*) absolute temperature, (*b*) standard conditions, (*c*) combustion, (*d*) molecular weight, (*e*) filtrate, (*f*) sublimation, (*g*) water of crystallization, (*h*) destructive distillation, (*i*) atom, (*j*) hydrocarbon.

2. Complete and balance each of the equations indicated below, using symbols or formulas throughout:

(*a*) ammonia + water =

(*b*) potassium + water =

(*c*) calcium carbonate + hydrochloric acid =

(*d*) potassium iodide + chlorine =

(*e*) barium chloride + sodium sulphate =

(*f*) slaked lime + ammonium chloride =

(*g*) aluminum sulphate + sodium carbonate + water =

(*h*) nitric oxide + oxygen =

(*i*) silicon dioxide + sodium carbonate (heated) =

(*j*) acetylene + oxygen (ignited) =

3. Describe a simple laboratory method for obtaining nitrogen from ordinary air. What is the difference (if any) between the product obtained by this method, and that obtained by heating ammonium nitrite?

How do you account for the fact that leguminous plants

such as peas, beans, and clover do not require fertilization with nitrogen compounds even under conditions that would render this treatment necessary in the case of other plants?

4. (a) What volume of acetylene gas, measured under standard conditions, would be obtained by treatment of 128 grams of pure calcium carbide with water?

(b) What weight of sulphur must be burned in order to yield sufficient sulphur dioxide to occupy a volume of 11.2 liters under standard conditions?

5. (a) It was found that exactly 10 cc. of a solution of sulphuric acid, containing 49 grams of the acid per liter, was required for the neutralization of 25 cc. of a solution of potassium hydroxide. What was the strength of this solution, expressed in grams per liter?

(b) What volume of hydrogen gas measured at 18° and under 740 mm. pressure will exactly suffice for the complete reduction of 10 grams of pure cupric oxide?

6. Certain substances, such as calcium chloride and phosphorus pentoxide, when exposed to the atmosphere take up water, finally dissolving in the water thus absorbed. How would you account for this fact? What name is given to substances that have this property? What use is made of such substances?

7. Give one method in each case for the preparation of any five of the following compounds, and mention two properties and one useful application of each of the substances prepared: sodium carbonate, potassium nitrate, silver bromide, nitric acid, ammonia, carbon dioxide, calcium carbide.

8. How would you distinguish, by chemical means, between (a) nitrous oxide and nitric oxide, (b) concentrated sulphuric acid and dilute sulphuric acid, (c) potassium iodide and potassium chloride, (d) carbon monoxide and carbon dioxide, (e) potassium sulphate and ammonium sulphate?

9. How may quick lime be prepared? What chemical change takes place in the drying of ordinary mortar? What substances ordinarily cause temporary and permanent hard-

ness in water? Write the equation representing the reaction involved in the removal of temporary hardness by boiling.

10. (a) Describe briefly the methods used in the separation of three of the following metals from their ores: (1) iron, (2) zinc, (3) aluminum, (4) copper, (5) silver.

(b) What is thermit? Describe briefly the Goldschmidt process of rail-welding that involves the use of this substance.

BOTANY

Answer any nine questions. No extra credit will be given for more than nine questions.

1. What are the principal parts of a cell? Illustrate by a drawing, labelling all parts.

2. Give the general characters of the groups: thallophytes, bryophytes, pteridophytes, and spermatophytes, giving an example of each.

3. Describe and illustrate by sketches the life-history of a fern.

4. Describe and compare the features of the seeds of the common bean or kindred plant, and of Indian corn or a kindred plant. Illustrate by sketches and name all parts.

5. Give an example of a complete, a perfect, and an imperfect flower. What is the function of the different parts of the flower?

6. What are the fundamental characters that distinguish monocotyledons from dicotyledons?

7. Describe in detail an experiment proving that a plant is able to manufacture, transport, and store starch.

8. What are stomata, where are they found, and what is their function?

9. Describe three adaptations in flowers for cross pollination.

10. Explain the difference between herbaceous and woody plants. Name two examples of each, giving the scientific names.

11. How do trees and shrubs adapt themselves to winter conditions?

12. Define plant ecology ; also define the following terms : mesophyte, hydrophyte, and xerophyte.

ZOOLOGY

Answer one question in each of the groups.

I. (a). What is meant by the adaptation of structure to function? Illustrate by a description of the food getting structures and their use in an ameba (or any other protozoan), hydra and frog.

(b). Explain the locomotion of a fish, tadpole, frog, bird, bat, whale. Point out the adaptations to the particular mode of locomotion in connection with each.

II. (a). Describe the life-history of the butterfly and illustrate two of its stages with diagrams. Compare with the growth and development of the grasshopper. Explain the type of metamorphosis found in each.

(b). Describe the life-history of the frog. Make a diagram of the adult and tadpole stages labeling all the external structures. Compare the metamorphosis with that of the butterfly or a grasshopper. Point out the adaptations to mode of life in both the tadpole and adult.

III. (a). By what characteristics of color markings, habits or song would you distinguish the following birds : Baltimore oriole, nuthatch, flicker, chickadee, phoebe, blue-bird, and downy woodpecker. Which of these birds remain throughout the winter in the latitude of New York State?

(b). Write a discussion of the value of birds to man.

IV (a). Explain fully why respiration is a necessary function in the animal body.

(b). Compare the method of respiration in a fish, an earthworm, and a frog, and an insect.

V. (a). Define the following : excretions, metamorphosis, cilia, spiracle, carapace, nucleus, fauna.

(b). Give the function of the following and name an animal in which each is found : flagellum, pseudopodium, mandible, siphon, tentacle, plastron, mantle.

BIOLOGY

State briefly what biological subjects you have studied, with what proportion of recitation and laboratory work and for what periods. Any laboratory books or other work done in such courses may be submitted as supplemental to the answers to be written to the following questions.

Answer any ten questions.

1. Name five native birds of New York State that are beneficial to man and give the approximate size, color, habitat and economic importance of each.

2. Diagram some protozoan you have studied, naming the parts. Discuss the importance of protozoans to man.

3. Compare the respiration of the fish with that of man. What changes take place in the blood?

4. Name one beneficial and four injurious insects of New York State. Explain how each is of economic importance.

5. Name five elements and five compounds commonly found in living things.

6. Make a cross section of a woody stem to show pith, wood, pith rays, bark and regions of growth.

7. Compare the gametophyte stage of liver worts, ferns, and mosses.

8. Describe five adaptations for seed dispersal, naming a plant that employs each method described.

9. What are bacteria? Name five human diseases caused by bacteria.

10. Describe the process of food manufacture in plants, stating in what parts of the plant it may occur, the materials used, and the waste product. Describe a test for starch.

11. Describe the steps in the digestion and assimilation of a starchy food by man.

12. What are the chief differences in the structure of arteries and veins? What is the principal function of each of the following: White blood corpuscles, red corpuscles, plasma?

13. What is the number and position of the different kinds of teeth in an adult? Why is it harmful to break the enamel?

14. Describe the action of the ribs and of the diaphragm in respiration. What gas exchange takes place?

15. How does the body get rid of the waste which results from the activities of the cells?

PHYSICAL GEOGRAPHY

1. (a) Explain the relation of the heavy rainfall of the northwest coast of North America (from the Alaska Peninsula to Seattle, Wash.) to the planetary wind belt in which the region is located, the direction of the wind, the ocean currents and the topography of the land.

(b) Are the British Isles warmed by the waters of the Gulf Stream Drift or by the winds that blow over them? Explain your answer.

2. Enumerate at least four distinctive forms in which deposits of Continental Glaciation occur and describe one of these with reference to its topography, structure (*arrangement* of material in it) and kind of material it includes.

3. Diagram a *fault block mountain*. Where are such mountains found? Explain how they attain their elevation. What is a *mesa*?

4. What mineral is most abundant in the earth's outer mass? Into what substance does it weather in moist regions? Distinguish between *residual soil* and *bedrock*.

5. What is the difference between *baselevel* and *peneplain*? Diagram the positions of the sun, moon, and earth at the time of a *spring tide*.

6. Sketch a contour map of a conical hill 50 feet high with a valley extending up its side. Let the contour interval be five feet and make the hill three miles in diameter at the base. Indicate your horizontal scale.

7. Name several physiographic regions or provinces in the United States that you have studied in the laboratory with contour maps. Describe the particular physiographic features illustrated on some one of these maps, and state in what part of the country the region mapped is located. If no particular physiographic form was illustrated, describe the form of the valleys, the shape of the divides, the degree of relief shown, the effect of such relief on human occupation of the region, as course of roads and railroads, location of towns, etc. What laboratory manual did you use?

8. What physiographic forms or features have you noted about Cornell since coming to Ithaca? Or if you are writing this examination in New York.—What physiographic features do you know of along the Hudson River and the New Jersey coast? What systematic field work have you done in connection with the course you took in preparation for this examination?

9. What volcano has been active recently (past year) in the United States? Where is it located? What other extinct cones do you know of in that region? Where are the Columbia Lava Plateaus located? How were they formed?

10. What physical geography text did you study, how long, where? Were any relations between the physical geography of the region in which you studied and the human occupations or habitation of that region pointed out to you? If so, state one or more of them. State several places where swamps are found in the United States. Why are swamps unhealthy places to live in?

AGRICULTURE *

(May not be taken for entrance credit if any special subject in Agriculture is taken for that purpose.)

1. How do the Egg, General Purpose and Meat breeds differ as to size, disposition, color of egg, egg laying qualities, rapidity of growth, hardiness, ease of caring for?

2. Compare grass plants and legume plants in

1. Composition or feeding value.
2. Effect on fertility of soil.
3. Root system.

3. What is "Crop Rotation"? Why is crop rotation good for farm practice?

4. Explain how a good ration for a draft horse will differ from a good ration for a dairy cow and give reasons for the differences.

5. (1) Name the four leading breeds of dairy cattle.

(2) Where did each breed originate?

(3) What is the average per cent of butter fat in the milk of each breed?

(4) Give the leading characteristics by means of which individuals of each breed may be identified.

6. Name the constituents of milk and give the percentage of each constituent as found in whole milk.

7. Discuss the relative advantages of New York and Iowa for the production of beef, pork, eggs, and hay for sale.

8. Give the main points to be considered in choosing an orchard site.

9. Briefly discuss the organic matter of the soil as to origin, changes in soil, products of these changes and the importance of soil organic matter to soil fertility.

10. List the benefits of tile drainage and show how the capacity of the soil for available moisture may be increased thereby.

* For samples of the separate Agricultural examinations apply to the departments in charge.

DRAWING

Two examinations are given, one in freehand drawing and one in mechanical drawing. Applicants may take either, or by special arrangement may take both. The examination will be given and judged on the assumption that those taking it have had approximately 150 actual hours of instruction and practice for each $\frac{1}{2}$ credit point desired. One (1) point is the maximum credit allowed in the subject. Candidates taking the examination must present samples of their work, and a teacher's statement showing time and proficiency.

FREEHAND DRAWING

For this examination the applicant is required to make a pencil sketch of an object or group of objects. The objects used may be geometrical blocks with straight and curved lines and curved surfaces, simple pieces of pottery, furniture, or models with simple lines and surfaces. The purpose of the examination is to test the ability of the applicant to draw accurately and sympathetically just what he sees. Shading may or may not be required.

MECHANICAL DRAWING

Questions may call for instrumental drawing of geometric constructions, orthographic and isometric projection, oblique section and intersection of solids, surface developments, etc., and working drawings of machine details, as bolts, nuts, pulleys, gears, various simple castings, etc. Data for the problems in any given examination will be furnished in the form of sketches or photographs with dimensions marked or stated.

MANUAL TRAINING

Examinations will be offered in woodworking, forging, foundry work, and machine work. To satisfy the entrance requirement the applicant must have performed not less than 300 hours of actual work in the subjects in which the examination is taken. Candidates must present a teacher's statement of the time actually spent in the work and of the proficiency attained therein.

SCHOLARSHIP EXAMINATION PAPERS

ENGLISH

1. Write a composition, four or five pages in length, on one of the following topics : My Interest in Stories of the Sea. Illustrated Magazines. Burke's Efforts in Behalf of America. The Round Table. Wolfe and the Battle of Quebec. My Experiences in Business. Laboratory Methods of Instruction in Science. The Gyroscope. Military Drill. Magna Charta.

2. Assign each of the following writers to the century in which he produced his important works : Addison, Burke, Carlyle, Emerson, Franklin, Irving, Johnson, Lamb, Macaulay, Milton, Pope, Shakespeare, Stevenson, Tennyson, Wordsworth.

3.

"Come, my friends,
'Tis not too late to seek a newer world.
Push off, and sitting well in order smite
The sounding furrows ; for my purpose holds
To sail beyond the sunset, and the baths
Of all the western stars, until I die."

Give the part of speech and the grammatical construction of *push*, *sitting*, *sounding*, *baths*, *stars*. Explain the relation to the rest of the sentence of *to sail beyond the sunset* and *until I die*.

4. Select from one of Shakespeare's plays a principal character who has some marked weakness, and show into what difficulties that weakness leads him.

5. Give Macaulay's view of the difficulties of Johnson's position and surroundings.

6. What books with which you have become familiar during your preparatory study would you recommend (*a*) to a boy fond of stirring action and adventure ; and (*b*) to a more mature reader interested in character ? Justify your selection.

7. It has been said of Burke that "Practice was his touchstone ; a theory was useless unless you could prove

that it had worked." What support for this statement do you find in Burke's argument for conciliation?

8. Choose *a* or *b*.

a. Contrast, with some fullness of detail, the pleasures of *L'Allegro* and *Il Penseroso*.

b. What was the Holy Grail? Give your interpretation of the Holy Grail as it figures in *The Idylls of the King*.

GREEK

A.

TRANSLATION AT SIGHT.

(*The preparations of Cyrus the elder for a campaign against Croesus.*)

Ὁ δὲ Κῦρος τά τε ἄλλα εἰς τὸν πόλεμον παρεσκευάζετο μεγαλοπρεπῶς, ὥς δὴ ἀνὴρ οὐδὲν μικρὸν ἐπινοῶν πράττειν, ἐπεμέλετο δὲ οὐ μόνον ὧν ἔδοξε τοῖς συμμάχοις, ἀλλὰ καὶ ἔριν ἐνέβαλλε πρὸς ἀλλήλους τοῖς φίλοις ὅπως αὐτοὶ ἕκαστοι φανούνται καὶ εὐοπλότατοι καὶ ἱππικώτατοι καὶ ἀκοντιστικώτατοι καὶ τοξικώτατοι καὶ φιλοπονώτατοι. ταῦτα δὲ ἐξεργάζετο ἐπὶ τὰς θήρας ἐξάγων καὶ τιμῶν τοὺς κρατίστους ἕκαστα· καὶ τοὺς ἄρχοντας δὲ οὓς ἑώρα ἐπιμελομένους τούτου ὅπως οἱ αὐτῶν κράτιστοι ἔσονται στρατιῶται, καὶ τούτους ἐπαινῶν τε παρώξυνε καὶ χαριζόμενος αὐτοῖς ὃ τι δύναίτο, εἰ δέ ποτε θυσίαν ποιοῖτο καὶ ἑορτὴν ἄγοι, καὶ ἐν ταύτῃ ὅσα πολέμου ἔνεκα μελετῶσιν ἄνθρωποι πάντων τούτων ἀγῶνας ἐποίει καὶ ἄθλα τοῖς νικῶσι μεγαλοπρεπῶς ἐδίδου, καὶ ἦν πολλὴ εὐθυμία ἐν τῷ στρατεύματι. τῷ δὲ Κύρῳ σχεδὸν τι ἤδη ἀποτετελεσμένα ἦν ὅσα ἐβούλετο ἔχων στρατεύεσθαι πλὴν τῶν μηχανῶν. καὶ γὰρ οἱ Πέρσαι ἱππεῖς ἔκπλεω ἤδη ἦσαν εἰς τοὺς μυρίους, καὶ τὰ ἄρματα τὰ δρεπανηφόρα, ἃ τε αὐτός κατεσκευάζεν, ἔκπλεω ἤδη ἦν εἰς τὰ ἑκατόν, ἃ τε Ἀβραδάτας ὁ Σούσιος ἐπεχείρησε κατασκευάζειν ὅμοια τοῖς Κύρου, καὶ ταῦτα ἔκπλεω ἦν εἰς ἄλλα ἑκατόν. καὶ τὰ Μηδικὰ δὲ ἄρματα ἔκπλεω καὶ ταῦτα ἦν εἰς ἄλλα ἑκατόν. καὶ ἐπὶ τὰς καμήλους δὲ τεταγμένοι ἦσαν ἄνδρες δύο ἑφ' ἑκάστην τοξόται. καὶ ὁ μὲν πλείστος στρατὸς οὕτως εἶχε τὴν γνώμην ὥς ἤδη παντελῶς κεκρατηκὼς καὶ οὐδὲν ὄντα τὰ τῶν πολεμίων.

B.

ENGLISH INTO GREEK.

All the Ionic cities except Miletus had revolted from Tissaphernes to Cyrus. When Tissaphernes perceived that some

were planning the same thing in Miletus he seized those plotting against him, and some he put to death and others he banished. Cyrus requested those thus banished to join him in his expedition (verb). He promised them that if he successfully accomplished the purpose (ἐφ' ᾧ) of the expedition (verb), he would not stop till he should restore them to Miletus.

C.

GRAMMATICAL QUESTIONS.

1. Decline *θάλαττα, παῖς, πούς*.
2. Define *enclitic, proclitic, postpositive*, and give three examples of each.
3. When should *μή* be used with the indicative? with the infinitive? with the participle?
4. Write the first person singular in each mood of the present, first aorist, and second aorist of *ἵστημι*, and add the English equivalent of each.
5. Distinguish between the meaning of :
 - (a) *τίν' ἄνδρα ὃν γινώσκεις.*
 - (b) *ἄνδρα τινὰ ὃν γινώσκεις.*
 - (c) *ἄνδρα ὃντινα γινώσκεις.*
6. Write the passive equivalent for :
 - (a) *οἱ στρατιῶται αὐτὸν κλέπτοντα εἶλον.*
 - (b) *οἱ στρατιῶται αὐτὸν στρατηγὸν εἶλοντο.*
 - (c) *οἱ στρατιῶται αὐτὸν ἀπέκτειναν.*

LATIN

1. Give the Latin for "that no one could" in the three following sentences.
 - a. The letter was so poorly written that no one could read it.
 - b. He said that no one could read the letter.
 - c. He sealed the letter in order that no one could read it.
2. Decline in the singular, three genders, *celer*.

3. Give the latin for 'once' twice' three times' 'four times'

4. Give principal parts of the following verbs, marking all long vowels: *veto, jaceo, figo, obliuo, tero*.

5. Decline *dies, senex, gener*.

6. Give an accurate translation into correct and appropriate English:

a. Sed incidunt, ut supra dixi, saepe causae cum repugnare utilitas honestati videatur, ut animadvertendum sit repugnetne plane an possit cum honestate conjungi. Eius generis hae sunt quaestiones: si, exempli gratia, vir bonus Alexandria Rhodum magnum frumenti numerum advexerit in Rhodiorum inopia et fame summaque annonae caritate, si idem sciat complures mercatores Alexandria solvisse navesque in cursu frumento onustas petentes Rhodum viderit, dicturusne sit id Rhodiis an silentio suum quam plurimo venditurus.

b. Saevit atrox Volcens, nec teli conspicit usquam auctorem, nec quo se ardens immittere possit. 'Tu tamen interea calido mihi sanguine poenas persolves amborum' inquit; simul ense recluso ibat in Euryalum. Tum vero exterritus, amens conclamat Nisus, nec se celare tenebris amplius aut tantum potuit perferre dolorem: 'Me, me--adsum qui feci--in me convertite ferrum, o Rutili: mea fraus omnis; nihil iste nec ausus nec potuit; caelum hoc et conscia sidera testor; tantum infelicem nimium dilexit amicum. Talia dicta dabat; sed viribus ensis adactus transadigit costas et candida pectora rumpit. Volvitur Euryalus leto, pulchrosque per artus it cruor, inque umeros cervix collapsa recumbit: purpureus veluti cum flos succisus aratro languescit moriens, lassove papavera collo demisere caput, pluvia cum forte gravantur.

Mark the syllable lengths in the first five lines of selection b., and indicate the division into feet.

7. Translate into Latin :

Caesar now despatched Labienus with four legions to hold the Senones in check, while he himself turned south against the Arverni. Labienus however made little progress and Caesar's advance was halted at Gergovia. While he was on his way to this town, some of his cavalry, sent by Fabius, reported that the camp had been in imminent peril. The entire force of the enemy, they said, had attacked it, and many had been wounded by showers of arrows and missiles of every kind. On receiving this intelligence, Caesar pushed on and, thanks to the extraordinary energy of his men, he reached camp before sunrise.

GERMAN

I

Translate into English :

A. Die Wüste Sahara.

Nach allen Seiten erstreckt sich, endlos scheinend, die Wüste. Sie bedeckt, ein ungeheures, seltsames Reich, den größten Teil Nordafrikas, ganze Länder in sich fassend, fruchtbare Landstriche umschließend, tausendfältig abwechselnd und doch immer und überall sich gleichend. Kein Sterblicher hat sie ganz durchforscht; aber jeder Erdgeborene, der sie betrat, ist im innersten Herzen ergriffen worden von ihrer Größe, ihrem Zauber, ihrem Schrecken; keiner, der sie gesehen, wird die strahlende Sonnenglut und sengende Hitze ihrer Tage, den himmlischen Frieden und die märchenhaften Traumbilder ihrer Nächte, die Furchtbarkeit ihrer Stürme jemals vergessen. Und manch einem mag es ergangen sein, wie es den Söhnen der Wüste selbst ergeht: daß er später nach ihr sich zurücksehnt; daß er nur einmal noch einen Tag, eine Stunde in ihr atmen, nur einmal ihre Bilder wiedersehen möchte.

- B. Nimm diesen Ring! Es ist ein Königsring!
 Unscheinbar ist er, das ist wahr, und schlicht,
 Und dennoch kannst du für dein Königreich
 Ihn dir nicht kaufen, noch ihn mit Gewalt,
 Trotz aller deiner Macht, dem Träger rauben,
 Wenn er ihn dir nicht willig reichen will.

Trägst du ihn so, daß das Metall nach vorn
Zu sitzen kommt, so ist er bloß ein Schmuß.

Aber drehst du ihn

So weit herum, daß dieser kleine Stein,
Der dunkelrote, um sich bliken kann,
So bist du plötzlich unsichtbar und schreitest,
Wie Götter in der Wolke, durch die Welt.

II

1. Give the nominative and genitive singular and nominative plural with the corresponding form of the definite article in each case of: *Herz, Doktor, Zug, Mineral, Gebäude, Prinz, Drama, Wand, Reichtum, Jäger*.

2. Write out: 1435; $1\frac{1}{2}$; $19/20$; Ithaca, the 29. of Sept. 1915.

3. Give the meaning, the principal parts and the third person singular, present tense, of the following verbs: (Model: *ich gehe, ich ging, ich bin gegangen, er(es)geht fortgehen, studieren, frühstücken, stattfinden, geschehen, vollbringen, veranlassen, herunterfallen, wahrnehmen, heissen*).

4. Form German sentences illustrating the use of the subjunctive: (a) in conditions contrary to fact; (b) of purpose; (c) of wish; (d) in indirect discourse.

5. Supply missing prepositions and endings in following sentences:

1. Ich bin böse — mein— Vetter.
2. Er ist stolz — sein— Schwester.
3. Sie freut sich — d— schön— Wetter.
4. Ich rette ihn — sein— Feinde.
5. Er bittet — Geld.

6. Indicate by means of complete German sentences the difference in the use of the following verbs: *gehen, fahren, reiten*.

7. Define the following compounds by means of complete sentences, each containing a relative clause. (Model: *Feldweg: Ein Feldweg ist ein Weg, der über das Feld führt*) *Königreich, Weihnachtslied, Musikzimmer, Regenschirm, Kaffeetasse, Taschenmesser*.

8. Illustrate the difference in meaning between *mögen*, *dürfen* and *brauchen* by using these words in complete German sentences. Translate your sentences into English.

III

Translate into German :

A. Your friend tells me that you intend to call on Professor Walden tonight. Are you acquainted with him?

B. Yes and no. My parents tell me that he visited us in the West thirteen years ago when I was not quite five years old, but I do not remember him at all. But my parents know him very well. They all spent their childhood together in the same little village in Maine and although they all left it before they were twenty they have met more than once since. When my father had to visit the East, which was frequently the case until he sold his business, he always made it possible to come to Ithaca for a few days.

A. Oh indeed ! Then, of course, Professor Walden is really an old friend of yours, for you may be sure, he has not forgotten you.

B. You may be right. At least, he wrote my father as if he remembered me quite well.

IV

Write an essay in German of about one hundred words on your native state. („ Mein Heimatstaat ”).

FRENCH

I. Translate :

On a voulu, dans ces derniers temps, faire de Mme. Roland un type pour les femmes futures, une femme forte, républicaine, inspiratrice de l'époux, égale ou supérieure à lui, remplaçant par une noble et clairvoyante audace la timidité chrétienne, disait-on, et la soumission virginale. Ce sont là encore d'ambitieuses et abusives chimères. Les femmes comme Mme. Roland sauront toujours se faire leur place, mais elles seront toujours une exception. Une édu-

cation plus saine et plus solide, des fortunes plus modiques, des mariages plus d'accord avec les vraies convenances, devront sans doute associer de plus en plus, nous l'espérons, la femme et l'époux par l'intelligence comme par les autres parties de l'âme ; mais il n'y a pas lieu pour cela à transformer les anciennes vertus, ni même les grâces : il faut d'autant plus les préserver. A ceux qui citeraient Mme. Roland pour exemple, nous rappellerons qu'elle ne négligeait pas d'ordinaire ces formes, ces grâces qui lui étaient un empire commun avec les personnes de son sexe ; et que ce génie qui perçait malgré tout et s'imposait souvent, n'appartenant qu'à elle seule, ne saurait, sans une illusion étrange, faire autorité pour d'autres.

—SAINTE-BEUVE, *Mme. Roland*

II.

Braves gens, prenez garde aux choses que vous dites :
Tout peut sortir d'un mot qu'en passant vous perdez,
Tout, la haine et le deuil. Et ne m'objectez pas
Que vos amis sont sûrs et que vous parlez bas.
Écoutez bien ceci : Tête à tête, en pantoufle,
Portes closes, chez vous, sans un témoin qui souffle,
Vous dites à l'oreille au plus mystérieux
De vos amis de cœur, ou, si vous l'aimez mieux,
Vous murmurez tout seul, croyant presque vous taire,
Dans le fond d'une cave, à trente pieds sous terre,
Un mot désagréable à quelque individu ;
Ce mot, que vous croyez qu'on n'a pas entendu,
Que vous disiez tout bas dans un lieu sourd et sombre,
Court à peine lâché, part, bondit, sort de l'ombre ;
Tenez, il est dehors ; il connaît son chemin ;
Il marche, il a deux pieds, un bâton à la main,
De bons souliers ferrés, un passeport en règle :
Au besoin, il prendrait des ailes comme l'aigle.
Il vous échappe, il fuit, rien ne l'arrêtera ;
Il suit le quai, franchit la place, et caetera,
Passe l'eau sans bateau dans la saison des crues,
Et va, tout au travers d'un dédale de rues,
Droit chez le citoyen dont vous avez parlé.
Il sait le numéro, l'étage ; il a la clé,

Il monte l'escalier, ouvre la porte, passe,
Entre, arrive, et, railleur, regardant l'homme en face,
Dit : " Me voilà, je sors de la bouche d'un tel."
Et c'est fait : vous avez un ennemi mortel.

—VICTOR HUGO, *Toute la Lyre*.

III. Translate :

These gentlemen have at last succeeded in understanding what I wished to tell them. I was very glad to know what became of her after she left the city. I had already begun to copy this letter which they had given me. Looking at you I cannot help thinking of your father whom I knew when he was your age. We shall leave this evening, in order that our friends may not get there before we do. If I am not willing to do what you ask, it is not because I do not believe you but because I have no money now. I fear you may be mistaken. If I believed your sister were ill, I should send for a physician.

IV. Translate :

There was at Ferney a theater where they performed the tragedies of Voltaire. The parts were played by the guests. Mme. Denis, the niece of Voltaire, almost always took part in these performances. She had just played the role of Zaïre, when a gentleman from the neighborhood came up to her and complimented her very highly on her dramatic talent.

" In order to fill this role suitably, one ought at least to be young and pretty," said Mme. Denis with feigned modesty.

" Ah, Madame," answered the gentleman naïvely, " you have certainly proved the contrary." And he went off delighted with the compliment he imagined he had paid her.

V. Write in French to a friend a letter of about 200 words explaining why you decided to come to Cornell.

VI. Give a full synopsis of *savoir*, *craindre*, *lever*, *acquérir*.

ELEMENTARY MATHEMATICS

1. Simplify the expressions :

$$a) \quad \frac{m^2 - (b - a)^2}{m^2 - (a - b)^2} \quad \frac{(m - a)^2 - b^2}{(m - b)^2 - a^2} \quad \frac{am - ab + a^2}{bm - ab + b^2},$$

$$b) \quad a + b - \frac{1}{a + \frac{1}{b}} - \frac{1}{b + \frac{1}{a}},$$

2. A man travels 3 miles in one hour. During the first half hour he goes 10 yards farther per minute than during the second half hour. How many yards per minute does he go the first half hour?

3. Find the highest common factor and the least common multiple of the expressions

$$a) \quad 3x^3 - 8x^2 + 4x, \quad x^3 - 6x^2 + 12x - 8.$$

$$b) \quad 27x^3 + y^3, \quad 9x^2 - y^2$$

4. A and B run a race of 400 yards. In the first heat A gives B a start of 20 seconds, and wins by 50 yards. In the second heat A gives B a start of 125 yards and wins by 5 seconds. What is the speed in yards per second of each runner?

5. Show that lines drawn from the vertices of two angles of a triangle and terminating in the opposite sides cannot bisect each other.

6. Show how to construct a circle which shall touch a given circle and also touch both bounding radii of a given sector of this circle.

7. Find the locus of the mid-points of all chords drawn from a given point on the circumference of a given circle.

8. The sides of a triangle are 8, 26, and 30 inches. Find the radii of the circumscribed and inscribed circles.

ADVANCED MATHEMATICS

1. The slant height of a right circular cone is 2 feet. At what distance from the vertex must the slant height be cut

by a plane parallel to the base in order that the lateral surface may be divided into two equivalent parts?

2. Prove that a spherical angle is measured by the arc of a great circle described from its vertex as a pole and included between its sides (produced if necessary).

3. Find the locus of a point in space equidistant from three given points not in a straight line.

4. Find all the roots of the equation

$$18x^4 - 27x^3 + 10x^2 + 12x - 8 = 0.$$

5. The radius of the front wheel of a carriage is six inches less than that of the rear wheel. If the front wheel makes 80 revolutions more than the rear wheel in going a mile, what is the circumference of each wheel to the nearest inch?

6. Prove by complete induction the relation

$$1^3 + 2^3 + 3^3 + \dots + n^3 = \frac{n^2}{4} (n + 1)^2.$$

7. The angle of elevation of a tower (standing in a horizontal plane) from a point A due south is α , and from a point B due west of the first station it is β . If the distance AB between the two stations is b , express the height of the tower in terms of b , α , β .

8. Work out, by means of a figure and the definitions of the trigonometric functions, the value of all the functions of 30° . Derive from these results the values of sine and cosine of 15° and 75° expressed in radical form.

OFFICIAL PUBLICATIONS OF CORNELL UNIVERSITY

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These publications include

The Annual Register (for the year 1914-15, published January 15, 1915), price 50 cents.

Book of Views, price 25 cents.

Directory of Faculty and Students, First Term, 1915-16, price 10 cents, and the following informational publications, any one of which will be sent gratis and post free on request. The date of the last edition of each publication is given after the title.

General Circular of Information for Prospective Students, December 15, 1915.

Announcement of the College of Arts and Sciences, May 1, 1915.

Announcement of the Department of Chemistry, May 15, 1915.

Announcement of Sibley College of Mechanical Engineering and the Mechanic Arts, February 1, 1915.

Announcement of the College of Civil Engineering, March 1, 1915.

Announcement of the College of Law, June 1, 1915.

Announcement of the College of Architecture, August 1, 1915.

Announcement of the New York State College of Agriculture, July 1, 1915.

Announcement of the Winter Courses in the College of Agriculture, September 1, 1915.

Announcement of the Summer Term in Agriculture, April 15, 1915.

Announcement of the New York State Veterinary College, June 15, 1915.

Announcement of the Graduate School, February 15, 1915.

Announcement of the Summer Session, April 1, 1915.

Annual Report of the President, November 1, 1915.

Pamphlets on prizes, samples of entrance and scholarship examination papers, special departmental announcements, etc.

Announcement of the Medical College may be procured by writing to the Cornell University Medical College, Ithaca, N. Y.

Correspondence concerning the publications of the University should be addressed to

The Secretary of Cornell University,
Ithaca, New York.